

=> file registry

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STRUCTURE FILE UPDATES: 15 NOV 2007 HIGHEST RN 953991-83-8
DICTIONARY FILE UPDATES: 15 NOV 2007 HIGHEST RN 953991-83-8

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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=> file zcaplus

FILE 'ZCAPLUS' ENTERED AT 12:15:02 ON 16 NOV 2007
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FILE COVERS 1907 - 16 Nov 2007 VOL 147 ISS 22
FILE LAST UPDATED: 15 Nov 2007 (20071115/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCAPLUS' FILE

=> d stat que L28

L26	104	SEA	FILE=ZCAPLUS	ABB=ON	PLU=ON	MASAOKA S?/AU
L27	6	SEA	FILE=ZCAPLUS	ABB=ON	PLU=ON	IWAZAKI H?/AU
L28	1	SEA	FILE=ZCAPLUS	ABB=ON	PLU=ON	L26 AND L27

=> d stat que L32

10/580699

L26 104 SEA FILE=ZCAPLUS ABB=ON PLU=ON MASAOKA S?/AU
L31 242547 SEA FILE=ZCAPLUS ABB=ON PLU=ON BORON/BI
L32 2 SEA FILE=ZCAPLUS ABB=ON PLU=ON L31 AND L26

=> s L26,L31 and L25

L46 2 (L26 OR L31) AND L25

=> file wpix

FILE 'WPIX' ENTERED AT 12:15:52 ON 16 NOV 2007

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FILE LAST UPDATED: 13 NOV 2007 <20071113/UP>

MOST RECENT THOMSON SCIENTIFIC UPDATE: 200773 <200773/DW>

DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> IPC Reform backfile reclassification has been loaded to September 6th
2007. No update date (UP) has been created for the reclassified
documents, but they can be identified by 20060101/UPIC and
20061231/UPIC, 20070601/UPIC and 20071001/UPIC. <<<

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'BIX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> d stat que L43

L26 104 SEA FILE=ZCAPLUS ABB=ON PLU=ON MASAOKA S?/AU
L27 6 SEA FILE=ZCAPLUS ABB=ON PLU=ON IWAZAKI H?/AU
L43 1 SEA FILE=WPIX ABB=ON PLU=ON L26 AND L27

=> file zcaplus

FILE 'ZCAPLUS' ENTERED AT 12:16:12 ON 16 NOV 2007

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10/580699

FILE LAST UPDATED: 15 Nov 2007 (20071115/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCAPLUS' FILE

=> s L28 or L32 or L46
L47 4 L28 OR L32 OR L46

=> dup rem L47 L43
FILE 'ZCAPLUS' ENTERED AT 12:16:30 ON 16 NOV 2007
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FILE 'WPIX' ENTERED AT 12:16:30 ON 16 NOV 2007
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PROCESSING COMPLETED FOR L47
PROCESSING COMPLETED FOR L43
L48 4 DUP REM L47 L43 (1 DUPLICATE REMOVED)
ANSWERS '1-4' FROM FILE ZCAPLUS

=> d ibib abs hitind hitstr L48 1-4

L48 ANSWER 1 OF 4 ZCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2005:493613 ZCAPLUS Full-text
DOCUMENT NUMBER: 143:26729
TITLE: Process for preparing phosphonium tetraarylborate compounds for use together with transition metal complex catalysts in carbon-carbon bond, carbon-nitrogen bond, carbon-oxygen bond formation reactions
INVENTOR(S): **Masaoka, Shin; Iwazaki, Hideyuki**
PATENT ASSIGNEE(S): Hokko Chemical Industry Co., Ltd., Japan
SOURCE: PCT Int. Appl., 181 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005051963	A1	20050609	WO 2004-JP17628	20041126
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1688424	A1	20060809	EP 2004-819465	20041126
R:	CH, DE, FR, GB, IT, LI			
CN 1886411	A	20061227	CN 2004-80034977	20041126

US 2007098616	A1	20070503	US 2006-580699	20060525
IN 2006DN03663	A	20070831	IN 2006-DN3663	20060626
PRIORITY APPLN. INFO.:			JP 2003-399650	A 20031128
			JP 2003-399651	A 20031128
			WO 2004-JP17628	W 20041126

OTHER SOURCE(S): MARPAT 143:26729

AB The title compds. R1R2R3PH.BAr4 (I) [R1 = primary, secondary, or tertiary alkyl, cycloalkyl; R2 = H, primary, secondary, or tertiary alkyl, etc.; R3 = H, aryl, etc.; Ar = aryl] are prepared by reaction of R1R2R3P [R1 - R3 = as defined above] with HCl or sulfuric acid, followed by reaction with tetraarylborate M.BAr4 [M = Na, etc.; Ar = aryl]. I can be handled under air. Thus, treatment of a solution of tri-tert-butylphosphine in heptane with HCl, followed by reaction with a solution of sodium tetraphenylborate in water, gave tri-tert-butylphosphonium tetraphenylborate (II) in 87 mol% yield. II 0.084 g was weighed under air and was added to a flask containing palladium(II) chloride 0.014 g, triethylamine 0.0194 g, and THF 5.5 mL; the resulting mixture was stirred at 21°C for 30 min under argon; 4-bromotoluene 1.368 g was added; and the resulting mixture was stirred at 21°C for 30 min; 2.2 M solution of phenylmagnesium chloride in THF 4 mL was added dropwise at 21°C over 10 min; and the resulting mixture was stirred at 21°C for 2 h to give 4-methylbiphenyl in 87 mol% yield.

IC ICM C07F009-54

ICS C07F005-02; C07B037-02; B01J031-24; C07F015-00

CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 21, 25

IT 20573-48-2P 131322-08-2P 155234-93-8P **853073-44-6P****853073-45-7P 853073-46-8P 853073-47-9P****853073-48-0P 853073-50-4P 853073-51-5P****853073-53-7P 853073-54-8P 853073-55-9P****853073-56-0P 853073-57-1P 853073-59-3P****853073-61-7P 853073-62-8P 853073-63-9P****853073-64-0P 853073-65-1P 853073-66-2P**

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);

USES (Uses)

(process for preparing phosphonium tetraarylborate compds. for use together with transition metal complex catalysts in carbon-carbon bond, carbon-nitrogen bond, carbon-oxygen bond formation reactions)

IT **853073-44-6P 853073-45-7P 853073-46-8P****853073-47-9P 853073-48-0P 853073-50-4P****853073-51-5P 853073-53-7P 853073-54-8P****853073-55-9P 853073-56-0P 853073-57-1P****853073-59-3P 853073-61-7P 853073-62-8P****853073-63-9P 853073-64-0P 853073-65-1P****853073-66-2P**

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);

USES (Uses)

(process for preparing phosphonium tetraarylborate compds. for use together with transition metal complex catalysts in carbon-carbon bond, carbon-nitrogen bond, carbon-oxygen bond formation reactions)

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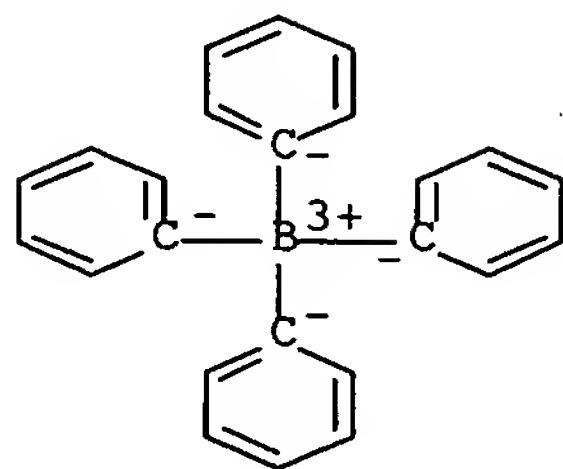
CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)methylphosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 33906-65-9

CMF C24 H20 B . H

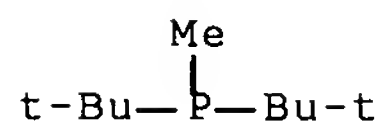
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CM 2

CRN 6002-40-0

CMF C9 H21 P



RN 853073-45-7 ZCAPLUS

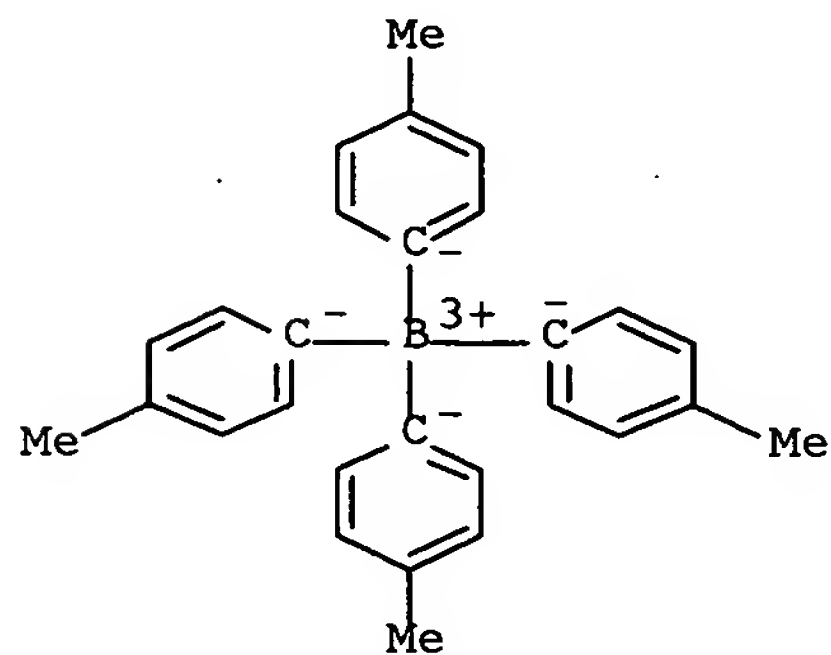
CN Borate(1-), tetrakis(4-methylphenyl)-, hydrogen, compd. with
bis(1,1-dimethylethyl)methylphosphine (1:1) (9CI) (CA INDEX NAME)

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CRN 78802-92-3

CMF C28 H28 B . H

CCI CCS

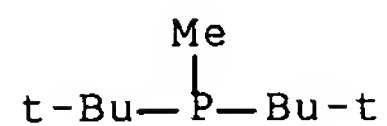


10/580699

CM 2

CRN 6002-40-0

CMF C9 H21 P



RN 853073-46-8 ZCAPLUS

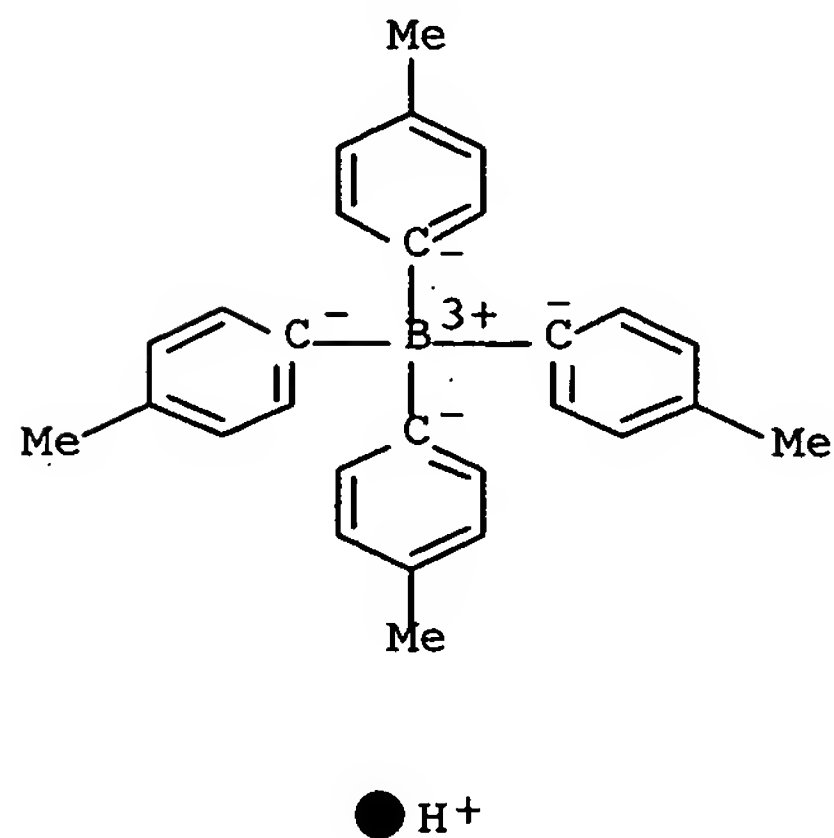
CN Borate(1-), tetrakis(4-methylphenyl)-, hydrogen, compd. with tris(1,1-dimethylethyl)phosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 78802-92-3

CMF C28 H28 B . H

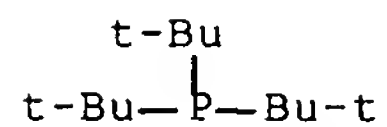
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CM 2

CRN 13716-12-6

CMF C12 H27 P



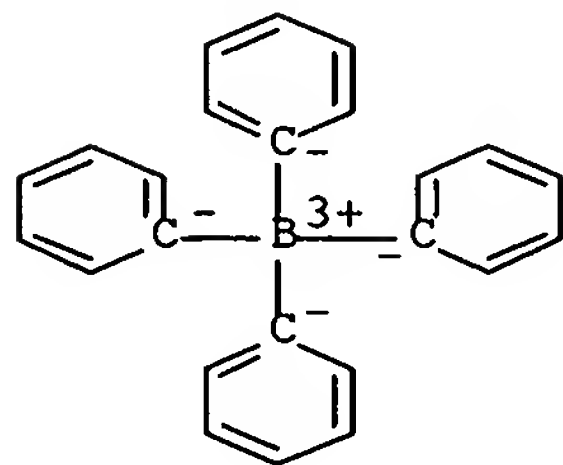
RN 853073-47-9 ZCAPLUS

CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)ethylphosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

10/580699

CRN 33906-65-9
CMF C24 H20 B . H
CCI CCS



CM 2

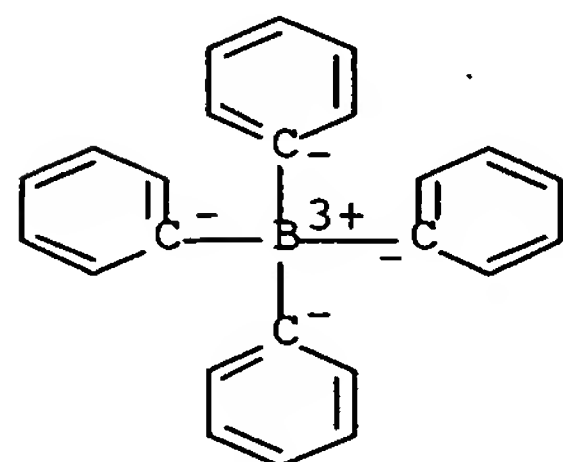
CRN 25032-48-8
CMF C10 H23 P



RN 853073-48-0 ZCAPLUS
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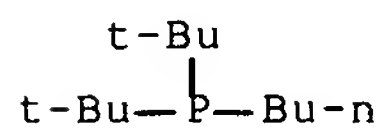
CRN 33906-65-9
CMF C24 H20 B . H
CCI CCS



CM 2

CRN 29949-72-2

CMF C12 H27 P



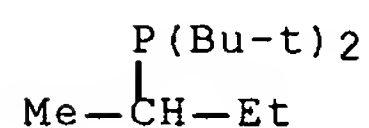
RN 853073-50-4 ZCAPLUS

CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)(1-methylpropyl)phosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 853073-49-1

CMF C12 H27 P

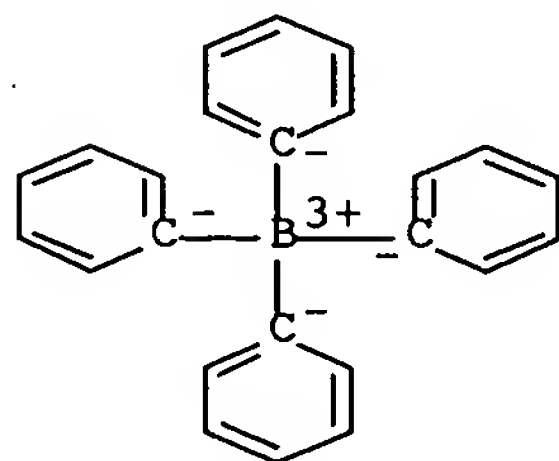


CM 2

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



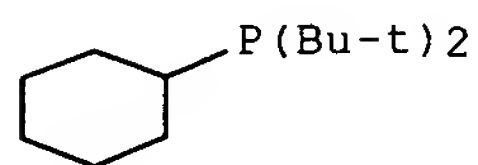
RN 853073-51-5 ZCAPLUS

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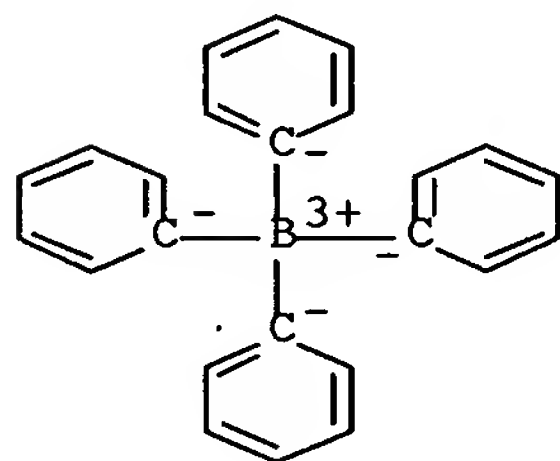
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CMF C14 H29 P



CM 2

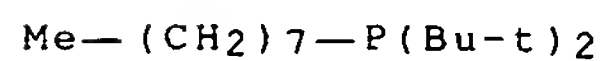
CRN 33906-65-9
CMF C24 H20 B . H
CCI CCS



RN 853073-53-7 ZCAPLUS
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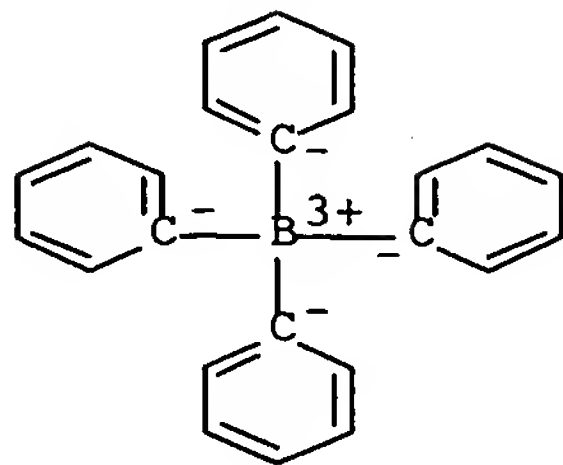
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CRN 853073-52-6
CMF C16 H35 P



CM 2

CRN 33906-65-9
CMF C24 H20 B . H
CCI CCS



RN 853073-54-8 ZCAPLUS

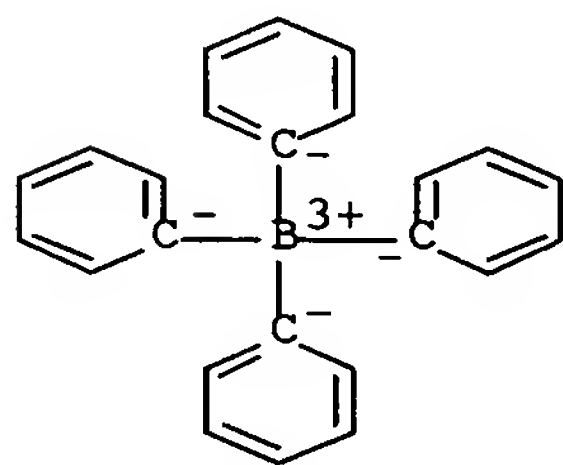
CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)phenylphosphine (1:1) (9CI) (CA INDEX NAME)

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CRN 33906-65-9

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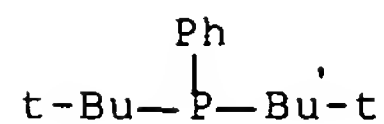
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CRN 32673-25-9

CMF C14 H23 P



RN 853073-55-9 ZCAPLUS

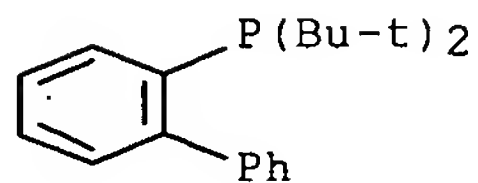
CN Borate(1-), tetraphenyl-, hydrogen, compd. with [1,1'-biphenyl]-2-ylbis(1,1-dimethylethyl)phosphine (1:1) (9CI) (CA INDEX NAME)

10/580699

CM 1

CRN 224311-51-7

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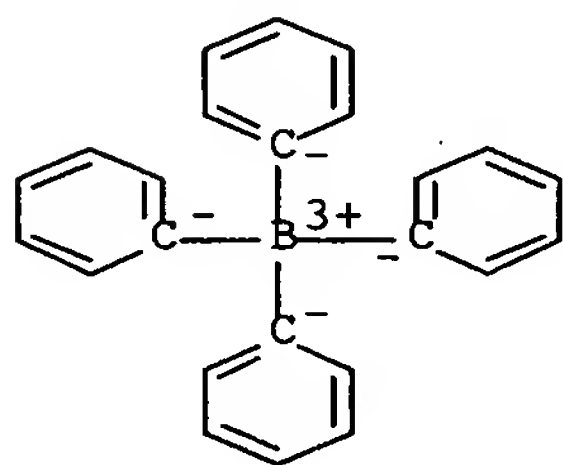


CM 2

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



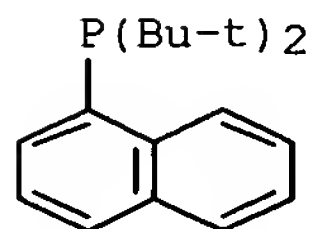
RN 853073-56-0 ZCAPLUS

CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)-1-naphthalenyphosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 200352-94-9

CMF C18 H25 P



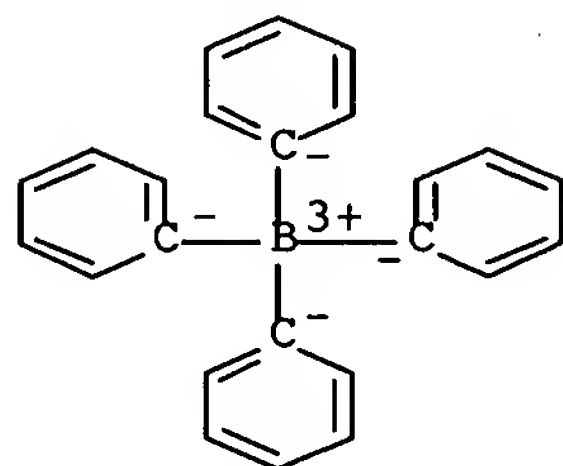
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CMF C24 H20 B . H

10/580699

CCI CCS



RN 853073-57-1 ZCAPLUS

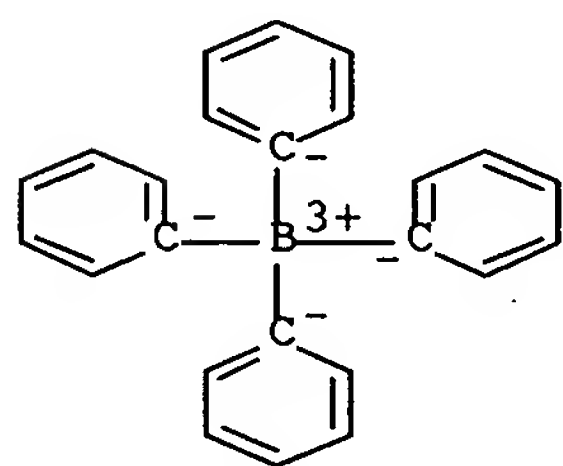
CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)(phenylmethyl)phosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



CM 2

CRN 27286-19-7

CMF C15 H25 P

(t-Bu)₂P-CH₂-Ph

RN 853073-59-3 ZCAPLUS

CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)[(4-

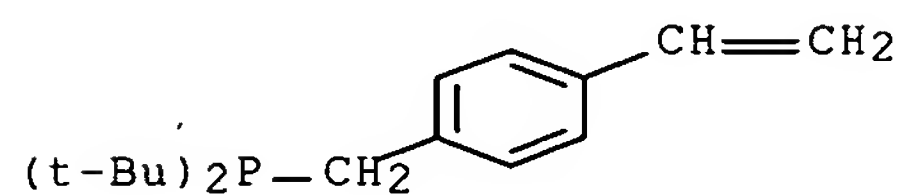
10/580699

ethenylphenyl)methyl]phosphine (1:1) (9CI) (CA INDEX NAME)

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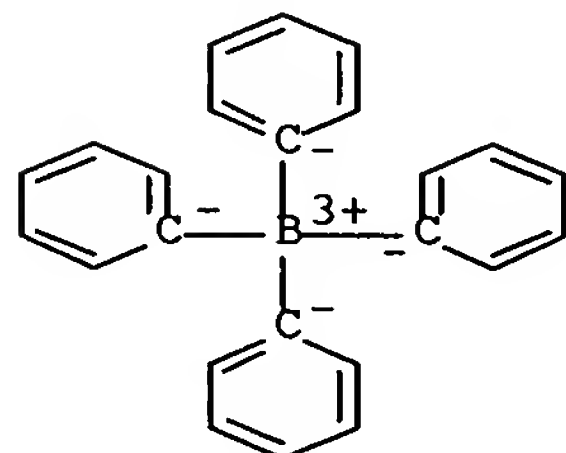


CM 2

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



● H⁺

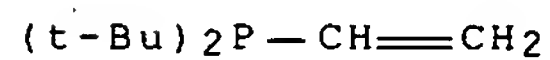
RN 853073-61-7 ZCAPLUS

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CRN 853073-60-6

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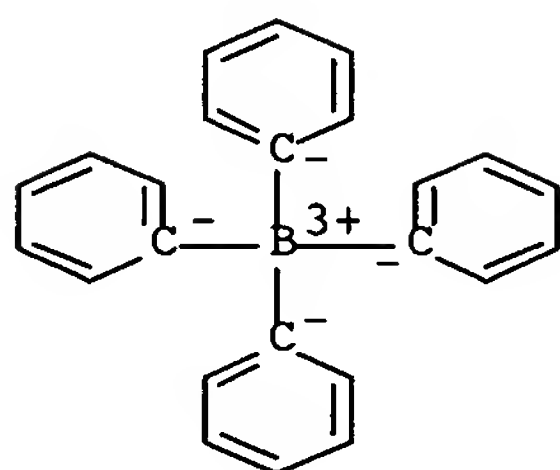


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CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



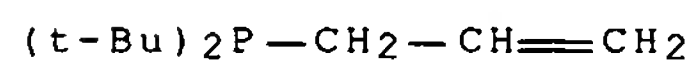
RN 853073-62-8 ZCAPLUS

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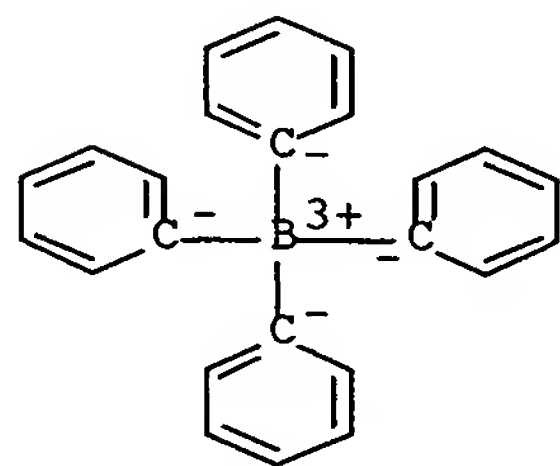


CM 2

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



RN 853073-63-9 ZCAPLUS

CN Borate(1-), tetrakis(4-methylphenyl)-, hydrogen, compd. with tricyclohexylphosphine (1:1) (9CI) (CA INDEX NAME)

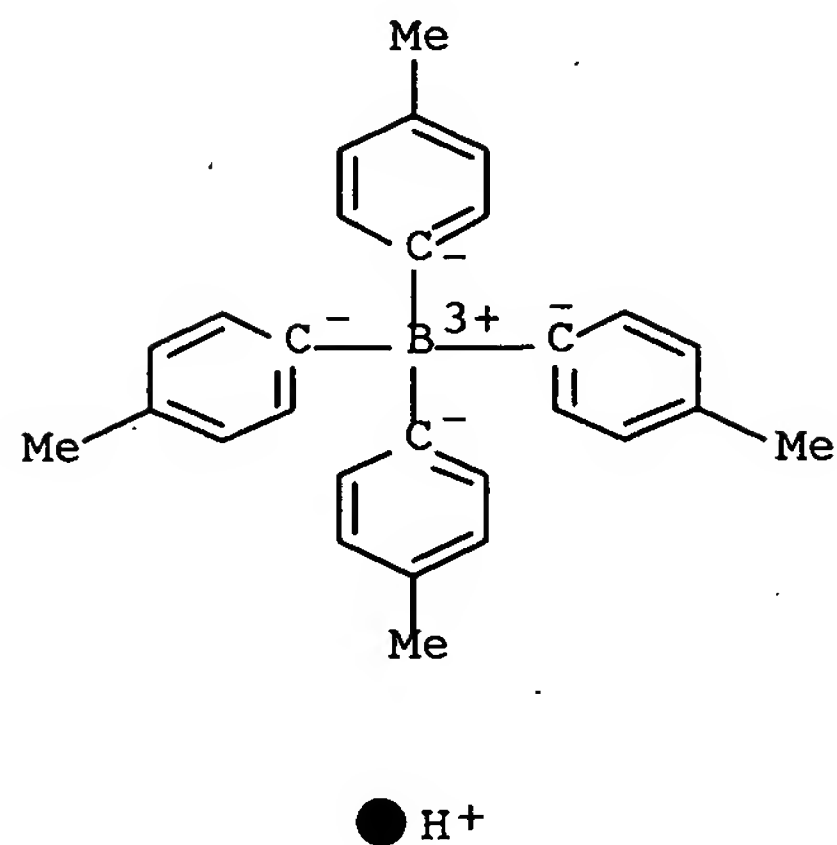
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CRN 78802-92-3

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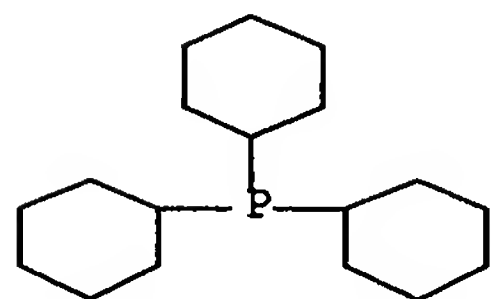
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CM 2

CRN 2622-14-2

CMF C18 H33 P



RN 853073-64-0 ZCAPLUS

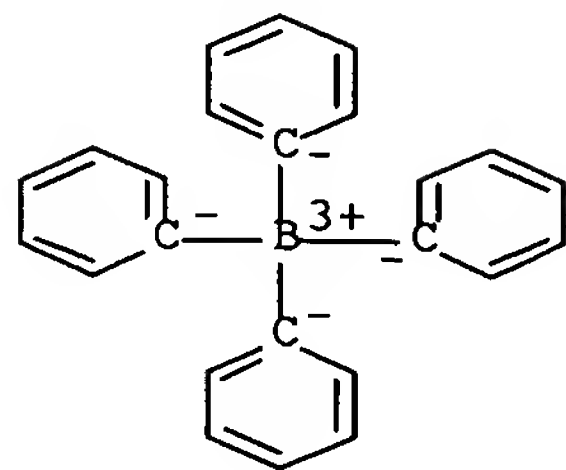
CN Borate(1-), tetraphenyl-, hydrogen, compd. with tris(1-methylethyl)phosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 33906-65-9

CMF C24 H20 B . H

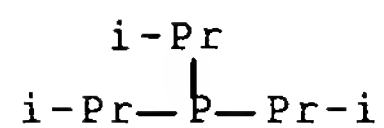
CCI CCS



CM 2

CRN 6476-36-4

CMF C9 H21 P



RN 853073-65-1 ZCAPLUS

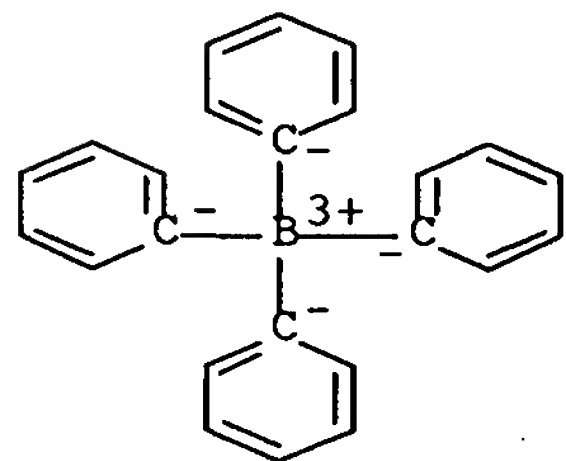
CN Borate(1-), tetraphenyl-, hydrogen, compd. with tricyclopentylphosphine
(1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS

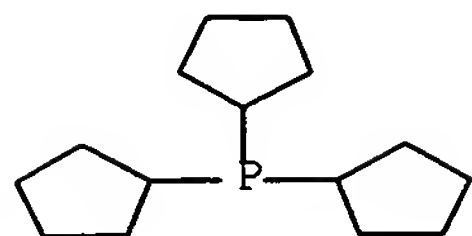


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CRN 7650-88-6

10/580699

CMF C15 H27 P



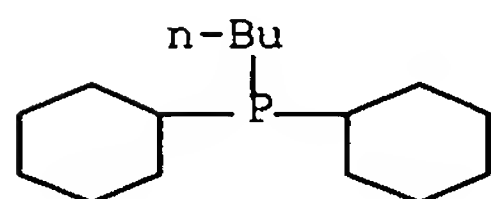
RN 853073-66-2 ZCAPLUS

CN Borate(1-), tetraphenyl-, hydrogen, compd. with butyldicyclohexylphosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 72617-31-3

CMF C16 H31 P

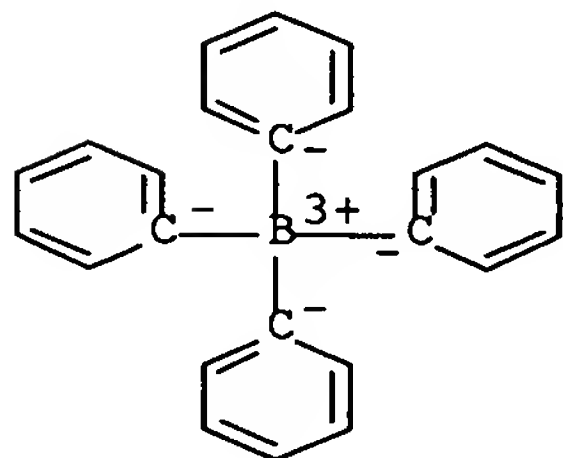


CM 2

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



REFERENCE COUNT:

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THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 2 OF 4 ZCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:733442 ZCAPLUS Full-text

DOCUMENT NUMBER: 145:190657

TITLE: Polyether silicone-containing aqueous antifouling

compositions, their coatings, and fish nets coated with them

INVENTOR(S): **Masaoka, Shigeru**
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006193731	A	20060727	JP 2005-360241	20051214
PRIORITY APPLN. INFO.:			JP 2004-366299	A 20041217

AB The compns. contain polyether silicones and no substantial organic solvents. A mixture of Poiz 530 [poly(carboxylic acid)-based high-mol. surfactant], Adekanol UH 752 (polyether urethane viscosity regulator), and H2O was mixed with TOC 3204 [bis(dimethyldithiocarbamoyl)zinc ethylenebis(dithiocarbamate)], Newcoat TS 100 (acrylic emulsion), and KF 6016 (polyether silicone) to give a composition, which was applied to a polyethylene knotless net to give a coating showing good antifouling property for 6 mo.

CC 42-7 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 5

IT 97-77-8, Tetraethylthiuram disulfide 1317-39-1, Cuprous oxide, uses 7440-50-8, Copper, uses 13463-41-7, Zinc pyrithione 17648-71-4, N,N'-Dimethyl-N'-phenyl-(N-fluorodichloromethylthio)sulfamide 56746-18-0, 2,3-Dichloro-N-(2',6'-diethylphenyl)maleimide 64359-81-5, 4,5-Dichloro-2-octyl-4-isothiazolin-3-one 64440-88-6, TOC 3204 106916-69-2 107065-10-1, Triphenyl(octadecylamine)**boron** 117659-55-9, 2,3-Dichloro-N-(2'-ethyl-6'-methylphenyl)maleimide 154592-20-8, Copper pyrithione 180128-56-7, Chloromethyl octyl disulfide 250578-38-2, Triphenyl[3-(2-ethylhexyloxy)propylamine]**boron** 459424-07-8, Asankadou NC 301 900534-06-7, Diphenylmethylisopropylamine**boron**
 RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (antifouling agent; aqueous antifouling coatings containing polyether silicones for fish nets)

L48 ANSWER 3 OF 4 ZCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2002:575117 ZCAPLUS Full-text
 DOCUMENT NUMBER: 137:125533
 TITLE: Polymerization of olefinic compounds by polymerization catalyst complexes containing phosphino, amino, or imino groups
 INVENTOR(S): Brookhart, Maurice S.; Kunitsky, Keith; Malinoski, Jon M.; Wang, Lin; Wang, Yin; Liu, Weijun; Johnson, Lynda Kaye; Kreutzer, Kristina A.; Ittel, Steven Dale
 PATENT ASSIGNEE(S): E. I. Du Pont de Nemours & Co., USA
 SOURCE: PCT Int. Appl., 77 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 5
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002059165	A2	20020801	WO 2002-US3088	20020125
WO 2002059165	A3	20030522		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002032289	A1	20020314	US 2001-871099	20010531
US 6897275	B2	20050524		
AU 2002243792	A1	20020806	AU 2002-243792	20020125
US 2003125485	A1	20030703	US 2002-57090	20020125
US 6710007	B2	20040323		
EP 1355956	A2	20031029	EP 2002-709300	20020125
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JP 2004517933	T	20040617	JP 2002-559466	20020125
US 2004158012	A1	20040812	US 2004-761030	20040120
US 7060768	B2	20060613		
US 2005043496	A1	20050224	US 2004-943199	20040916
PRIORITY APPLN. INFO.:				
			US 2001-264537P	P 20010126
			US 2001-294794P	P 20010531
			US 2001-871099	A 20010531
			US 2000-208087P	P 20000531
			US 2000-211601P	P 20000615
			US 2000-214036P	P 20000623
			US 2002-57090	A3 20020125
			WO 2002-US3088	W 20020125

OTHER SOURCE(S): MARPAT 137:125533

AB Certain complexes containing ligands having a phosphino group, amino group, or an imino group, and a second functional group such as amide, ester, or ketone, when complexed to transition metals, catalyze the (co)polymerization of olefinic compds. such as ethylene, α -olefins and/or acrylates. A newly recognized class of ligands for making copolymer containing polar monomers using late transition metal complexes is described.

IC ICM C08F010-00

CC 35-3 (Chemistry of Synthetic High Polymers)

IT 220313-59-7P	378797-06-9P	378797-08-1P	378797-10-5P	378797-14-9P
378797-16-1P	378797-18-3P	444107-56-6P	444107-61-3P	444107-64-6P
444107-66-8P	444107-69-1P	444107-72-6P	444107-74-8P	444107-77-1P
444107-88-4P	444107-90-8P	444107-92-0P	444107-95-3P	444107-96-4P
444107-98-6P	444108-00-3P	444108-02-5P	444108-04-7P	444108-06-9P
444108-07-0P	444108-09-2P	444108-18-3P	444108-21-8P	
444108-24-1P	444108-26-3P			

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(catalyst; polymerization of olefinic compds. by polymerization catalyst complexes

containing phosphino, amino, or imino groups)

IT 960-71-4, Triphenylboron 1109-15-5, Tris(pentafluorophenyl)boron 2797-28-6

RL: CAT (Catalyst use); USES (Uses)

(cocatalyst; polymerization of olefinic compds. by polymerization catalyst complexes

containing phosphino, amino, or imino groups)

10/580699

IT 444108-07-0P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
USES (Uses)

(catalyst; polymerization of olefinic compds. by polymerization catalyst
complexes

containing phosphino, amino, or imino groups)

RN 444108-07-0 ZCAPLUS

CN Nickel(1+), [1-[bis(1,1-dimethylethyl)phosphino-κP]-3-[bis(1,1-
dimethylethyl)phosphino]-1,3-dihydro-2H-inden-2-one-κO] [(1,2,3-
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bis(trifluoromethyl)phenyl]borate(1-) (9CI). (CA INDEX NAME)

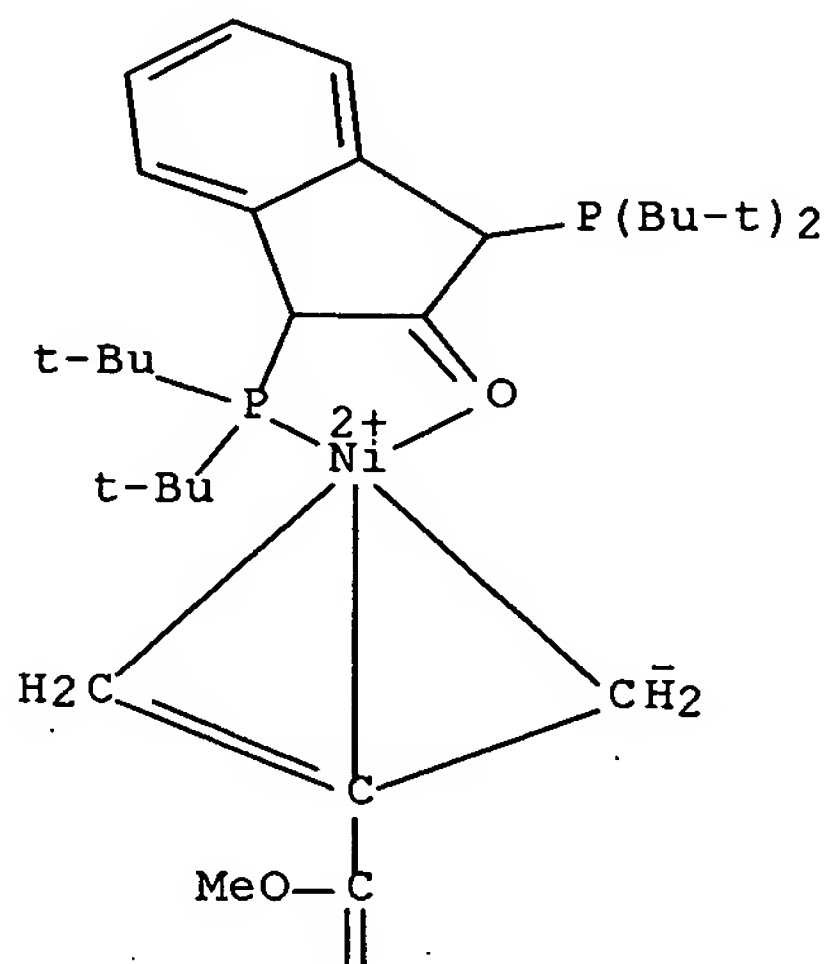
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CRN 378793-54-5

CMF C30 H49 Ni O3 P2

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PAGE 1-A



PAGE 2-A

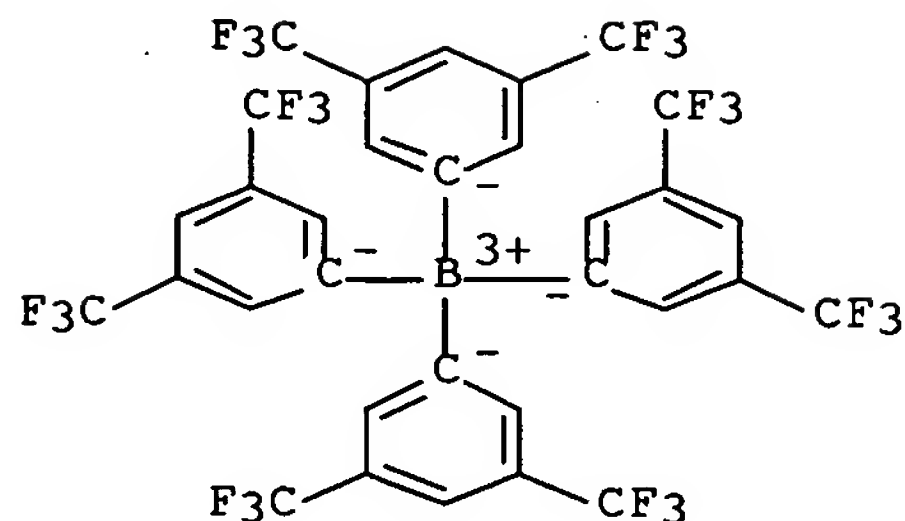
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CM 2

CRN 79230-20-9

CMF C32 H12 B F24

CCI CCS



L48 ANSWER 4 OF 4 ZCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1999:394727 ZCAPLUS Full-text
 DOCUMENT NUMBER: 131:60118
 TITLE: Antifouling coating compositions, their films, and their use in fouling control of ships
 INVENTOR(S): **Masaoka, Shigeru**; Yamato, Masafumi
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11166136	A	19990622	JP 1997-333143	19971203
PRIORITY APPLN. INFO.:			JP 1997-333143	19971203
OTHER SOURCE(S):			MARPAT 131:60118	

AB The compns., useful for fouling control of outer surfaces of ships, contain 2-20% Ph3B.NH2R1 (R1 = C3-30 alkyl), Cu compds., and film-forming components. Thus, WW Rosin 11, Laroflex MP 15 (vinyl chloride-vinyl iso-Bu ether copolymer) 7, E 028-90X (epoxy resin) 0.3, Ti White 5, ZnO 6, Cu2O 35, Ph3B-dodecylamine complex 10, Disparlon 630-20X (fatty amide wax) 3.5, PhMe 4, and xylene 18.2 parts were mixed to give a coating showing almost complete prevention of marine organism adhesion, excellent curability, and no cracking after soaking in seawater for 12 mo.

IC ICM C09D005-16
 ICS B63B059-04; C09D007-12

CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 5

ST antifouling coating phenylboron amine complex copper; ship fouling control coating **boron** complex; vinyl polymer coating antifouling **boron** complex

=> file registry

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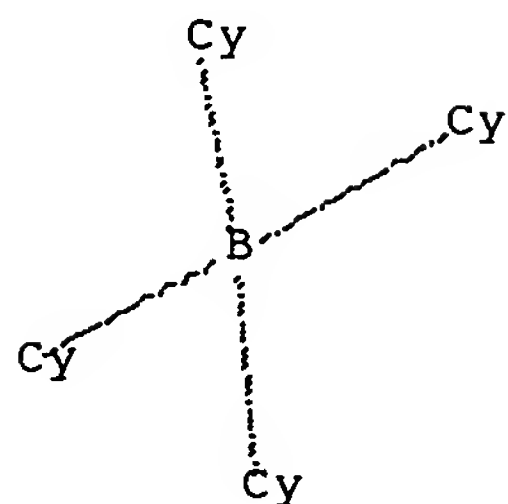
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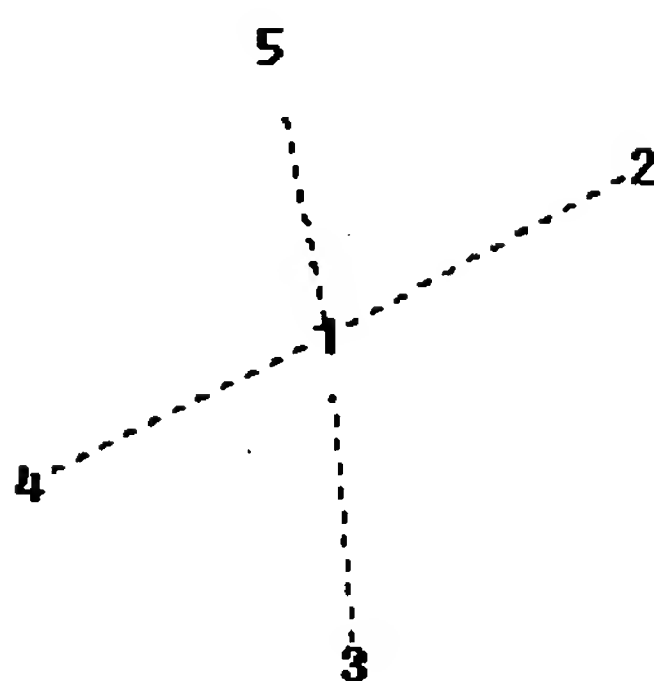
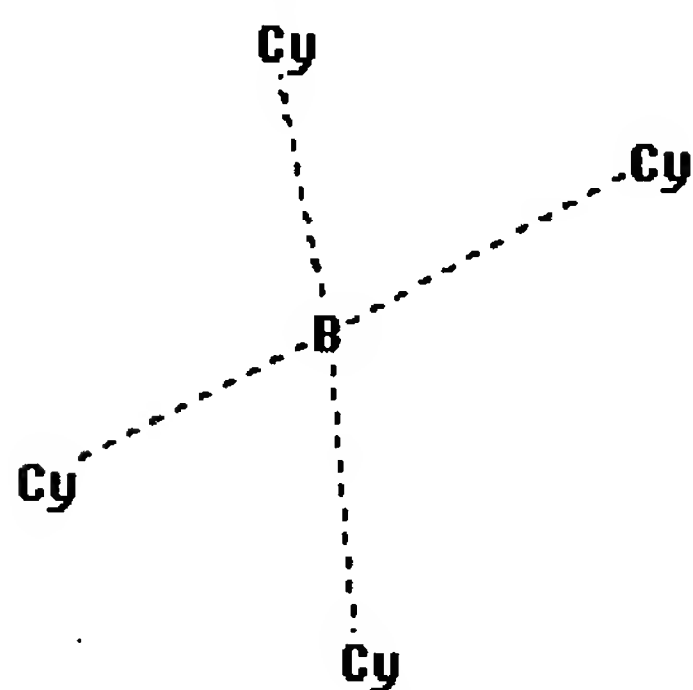
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L2 STR



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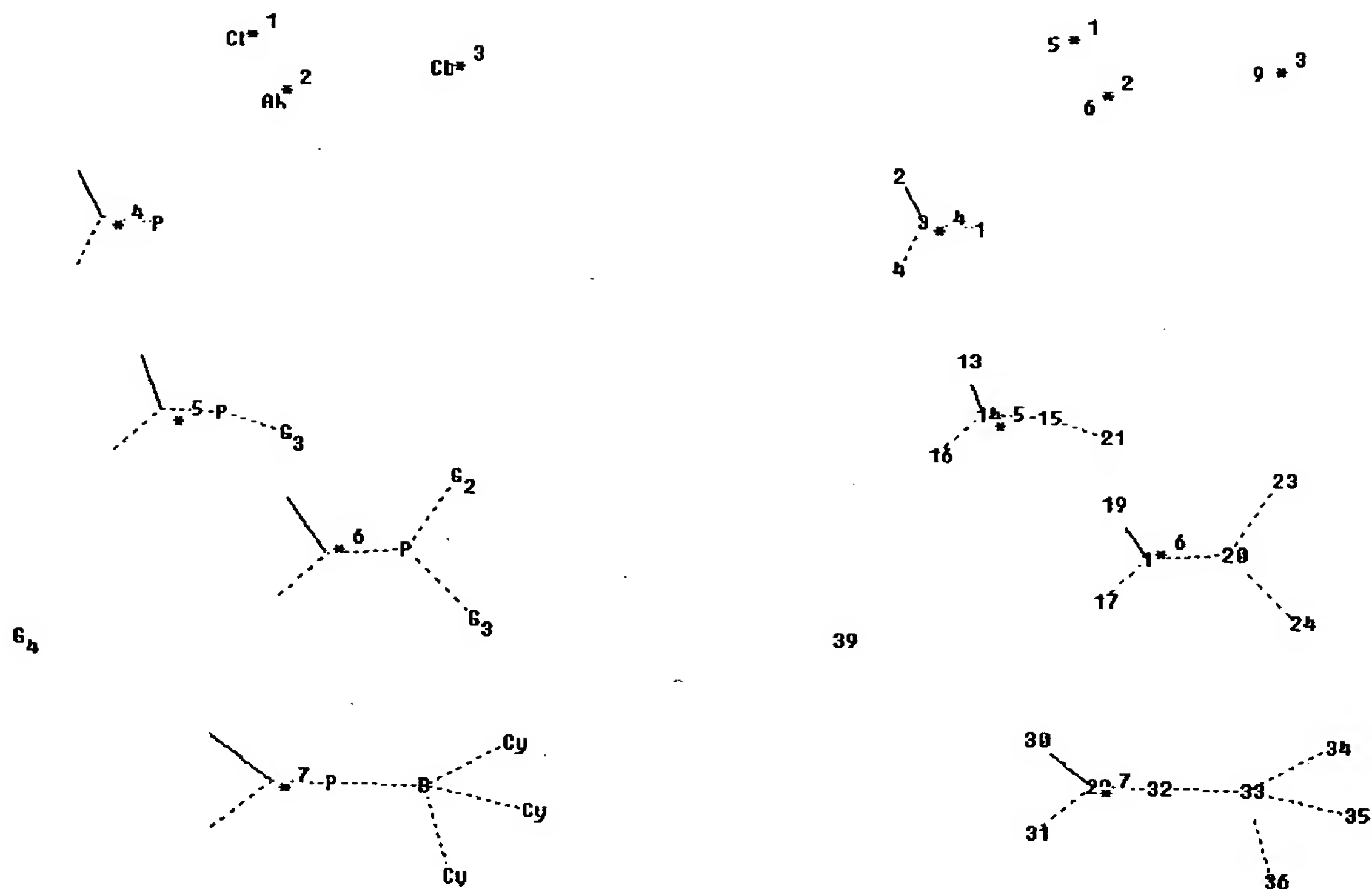
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chain bonds :
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exact/norm bonds :
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Generic attributes :
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3:
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4:
Saturation : Unsaturated
5:
Saturation : Unsaturated

L5 25294 SEA FILE=REGISTRY SSS FUL L2
L8 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation:
Uploading L8.str



chain nodes :

1 5 6 9 15 20 21 23 24 32 33 34 35 36 39

ring/chain nodes :

2 3 4 13 14 16 17 18 19 29 30 31

chain bonds :

1-3 14-15 15-21 18-20 20-23 20-24 29-32 32-33 33-34 33-35 33-36

ring/chain bonds :

2-3 3-4 13-14 14-16 17-18 18-19 29-31 29-30

exact/norm bonds :

1-3 3-4 14-15 14-16 15-21 17-18 18-20 20-23 20-24 29-31 29-32 32-33 33-34

33-35 33-36

exact bonds :

2-3 13-14 18-19 29-30

G2:[*1],[*2]

G3:[*1],[*2],[*3]

G4:[*4],[*5],[*6],[*7]

Connectivity :

1:1 E exact RC ring/chain 15:2 E exact RC ring/chain 20:3 E exact RC ring/chain

Match level :

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15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS 23:CLASS

10/580699

24:CLASS 29:CLASS

30:CLASS 31:CLASS 32:CLASS 33:CLASS 34:Atom 35:Atom 36:Atom 39:CLASS

Generic attributes :

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Saturation : Saturated

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Saturation : Unsaturated

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L50 16 L25 NOT L49

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FILE COVERS 1980 TO DATE.

=> d stat que L39

L39 4 SEA FILE=BABS ABB=ON PLU=ON (6281441/BABSAN OR 6594776/BABSAN OR 6580383/BABSAN OR 6432734/BABSAN)

=> file beilstein

FILE 'BEILSTEIN' ENTERED AT 12:19:02 ON 16 NOV 2007

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FILE LAST UPDATED ON September 26, 2007

FILE COVERS 1771 TO 2007.

*** FILE CONTAINS 10.119,480 SUBSTANCES ***

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For more detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

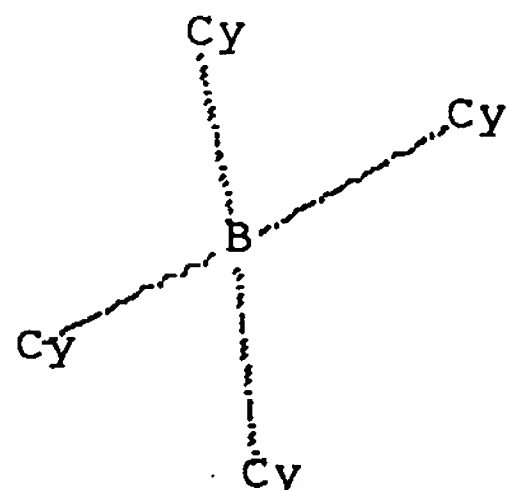
>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

 * PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. *
 * SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE *
 * ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
 * ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. *
 * FOR PRICE INFORMATION SEE HELP COST *

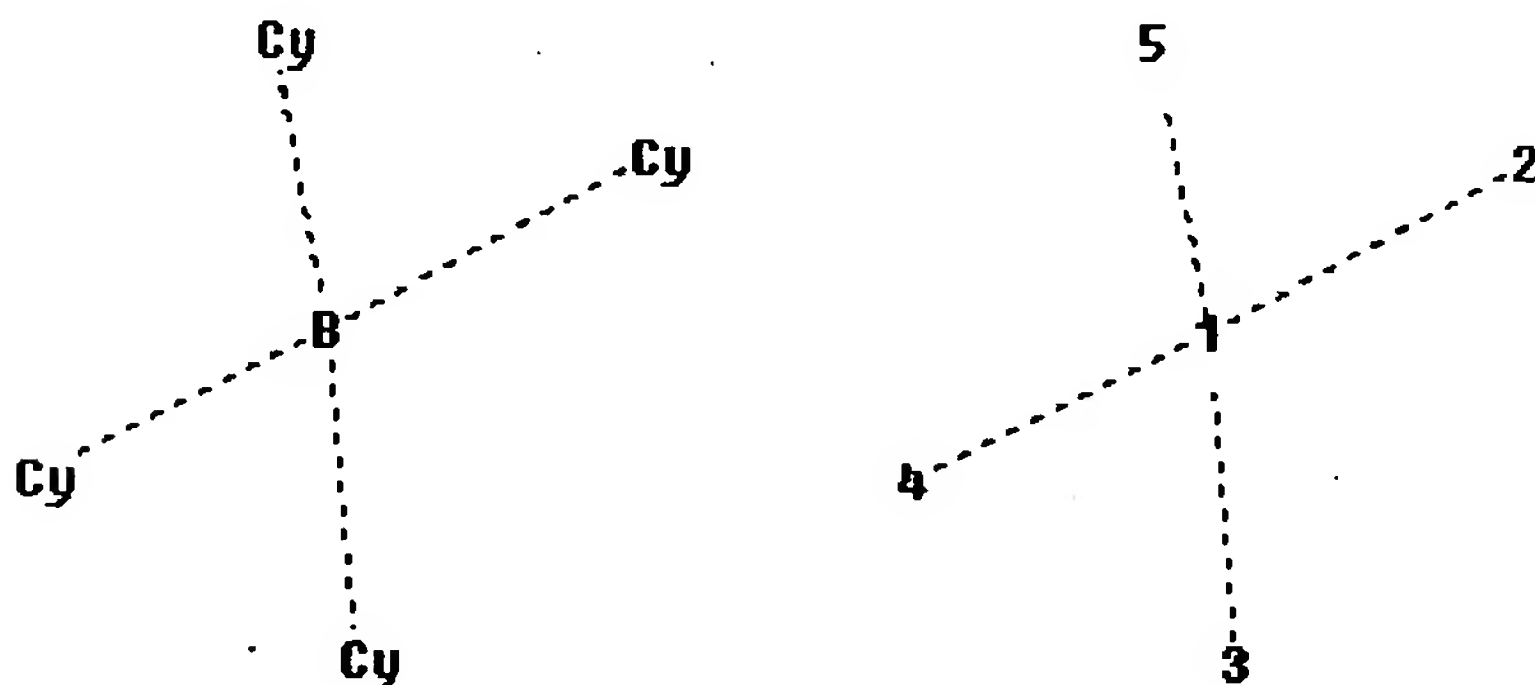
NEW

- * **PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.**
- * **NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.**

=> d stat que L41
 L2 STR



Structure attributes must be viewed using STN Express query preparation:
 Uploading L2.str



10/580699

chain nodes :

1 2 3 4 5

chain bonds :

1-2 1-3 1-4 1-5

exact/norm bonds :

1-2 1-3 1-4 1-5

Match level :

1:CLASS 2:Atom 3:Atom 4:Atom 5:Atom

Generic attributes :

2:

Saturation : Unsaturated

3:

Saturation : Unsaturated

4:

Saturation : Unsaturated

5:

Saturation : Unsaturated

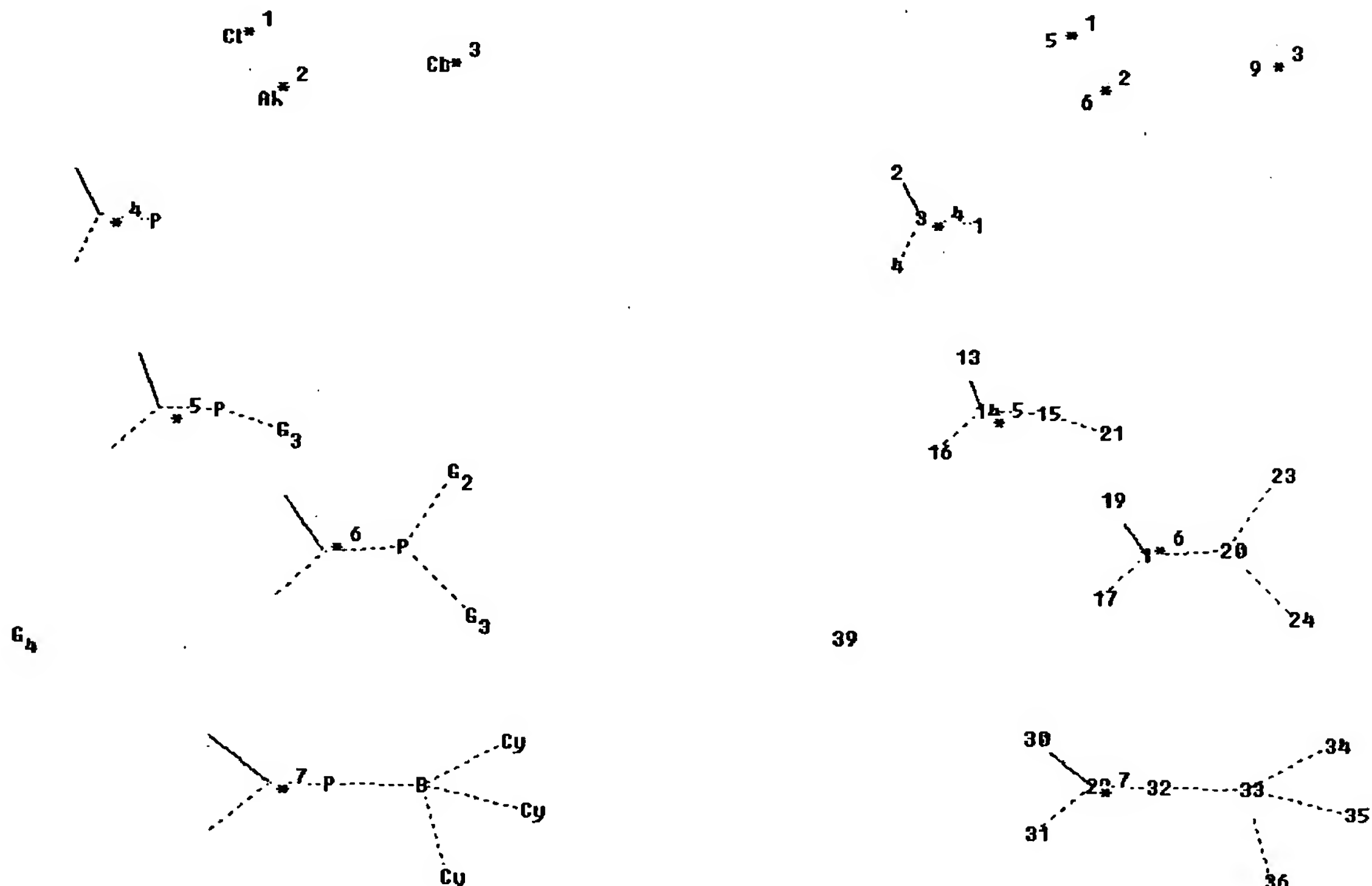
L8

STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation:

Uploading L8.str



chain nodes :

1 5 6 9 15 20 21 23 24 32 33 34 35 36 39

ring/chain nodes :

2 3 4 13 14 16 17 18 19 29 30 31

chain bonds :

1-3 14-15 15-21 18-20 20-23 20-24 29-32 32-33 33-34 33-35 33-36

ring/chain bonds :

2-3 3-4 13-14 14-16 17-18 18-19 29-31 29-30

exact/norm bonds :

1-3 3-4 14-15 14-16 15-21 17-18 18-20 20-23 20-24 29-31 29-32 32-33 33-34

33-35 33-36

exact bonds :

2-3 13-14 18-19 29-30

G2:[*1],[*2]

G3:[*1],[*2],[*3]

G4:[*4],[*5],[*6],[*7]

Connectivity :

1:1 E exact RC ring/chain 15:2 E exact RC ring/chain 20:3 E exact RC ring/chain

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:Atom 6:CLASS 9:Atom 13:CLASS 14:CLASS

15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS 23:CLASS

24:CLASS 29:CLASS

30:CLASS 31:CLASS 32:CLASS 33:CLASS 34:Atom 35:Atom 36:Atom 39:CLASS

Generic attributes :

5:

Saturation : Saturated

9:

Saturation : Unsaturated

34:

Saturation : Unsaturated

35:

Saturation : Unsaturated

36:

Saturation : Unsaturated

L35 2084 SEA FILE=BEILSTEIN SSS FUL L2

L37 16 SEA FILE=BEILSTEIN SUB=L35 SSS FUL L8

L38 9 SEA FILE=BEILSTEIN ABB=ON PLU=ON L37 AND BABSAN/FA

L41 7 SEA FILE=BEILSTEIN ABB=ON PLU=ON L37 NOT L38

=> dup rem L50 L39 L41

DUPLICATE IS NOT AVAILABLE IN 'BEILSTEIN'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE

FILE 'ZCAPLUS' ENTERED AT 12:19:19 ON 16 NOV 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE 'BABS' ENTERED AT 12:19:19 ON 16 NOV 2007

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FILE 'BEILSTEIN' ENTERED AT 12:19:19 ON 16 NOV 2007

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PROCESSING COMPLETED FOR L50

PROCESSING COMPLETED FOR L39

PROCESSING COMPLETED FOR L41

L51 24 DUP REM L50 L39 L41 (3 DUPLICATES REMOVED)
 ANSWERS '1-16' FROM FILE ZCAPLUS
 ANSWER '17' FROM FILE BABS
 ANSWERS '18-24' FROM FILE BEILSTEIN

=> d ibib abs hitstr L51 1-16; d iall L51 17; d ide allref L51 18-24

L51 ANSWER 1 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2006:433685 ZCAPLUS Full-text

DOCUMENT NUMBER: 145:136705

TITLE: An acidity scale of phosphonium tetraphenylborate
salts and ruthenium dihydrogen complexes in
dichloromethaneAUTHOR(S): Li, Tianshu; Lough, Alan J.; Zuccaccia, Cristiano;
Macchioni, Alceo; Morris, Robert H.CORPORATE SOURCE: Department of Chemistry, University of Toronto,
Toronto, ON, M5S 3H6, Can.SOURCE: Canadian Journal of Chemistry (2006), 84(2), 164-175
CODEN: CJCHAG; ISSN: 0008-4042

PUBLISHER: National Research Council of Canada

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Equilibrium consts. (KDM) for reactions between acids and bases of the title
compds. in CD₂Cl₂ (DM) were determined by ³¹P and ¹H NMR spectroscopy at room
temperature [HPCy₃]BPh₄ and [HPCy₃]BF₄, with pKDM assigned by literature
convention to 9.7, were used as the anchor compds. for the pKDM detns. A
continuous scale of pKDM values covering the range 9.7 to 5.7 is created with
the acidic compds. [HPR₃]BPh₄. Those acids with pKDM >6 are stable, while
those with more acidic cations HPR₃⁺ protonate BPh₄⁻ to produce R₃PBPh₃ and
benzene. The literature pKTHF values reported for [HPBu₂Ph]BPh₄,
[HPMePh₂]BPh₄, and [HPePh₂]BPh₄ are questionable because of this protonation
reaction. NOE and PGSE ¹H NMR techniques were used to show that [HPCy₂Ph]BPh₄
in DM exists as ion pairs and higher aggregates up to quadrupoles at the
concns. used in the acid-base studies. The new dihydrogen complexes
[Ru(H₂)Cl(PPh₃)₂(dach)]BF₄ (dach = (1R,2R)-(-)-diaminocyclohexane) and
[Ru(H₂)Cl{tmeP₂(NH)₂}]BF₄ (tmeP₂(NH)₂ = PPh₂C₆H₄CH₂NHMe₂CMe₂NHCH₂C₆H₄PPh₂)
were prepared by reaction of RuHCl(PPh₃)₂(dach) and RuHCl{tmeP₂(NH)₂} with
HBF₄. Their crystal structures are reported, and the pKDM values of their
BPh₄⁻ salts are 8.6 and 6.9, resp.

IT 853073-54-8 897015-21-3

RL: PRP (Properties)

(acidity scale from equilibrium consts. of phosphonium tetraphenylborate
salts and ruthenium dihydrogen complexes in dichloromethane)

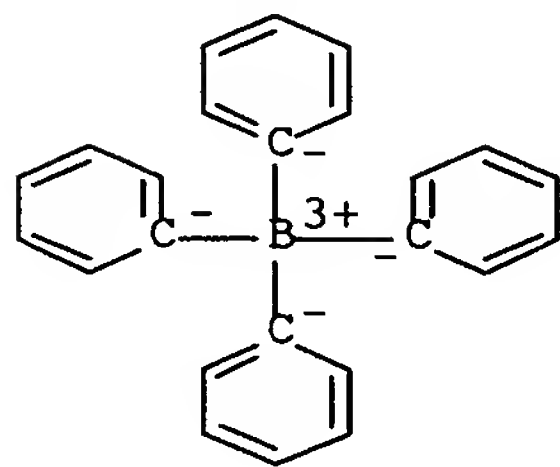
RN 853073-54-8 ZCAPLUS

CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-
dimethylethyl)phenylphosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

10/580699

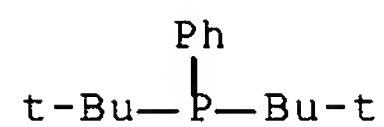
CRN 33906-65-9
CMF C24 H20 B . H
CCI CCS



● H⁺

CM 2

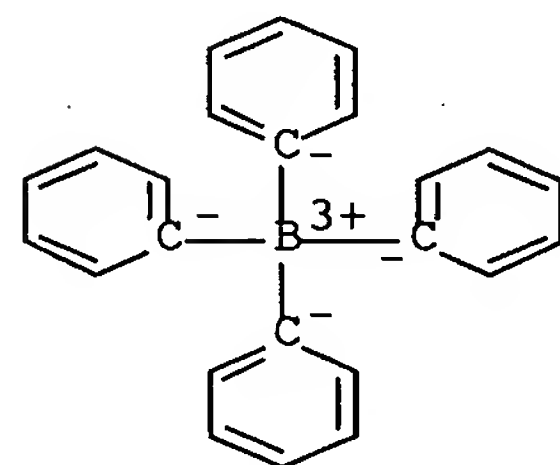
CRN 32673-25-9
CMF C14 H23 P



RN 897015-21-3 ZCAPLUS
CN Borate(1-), tetraphenyl-, hydrogen, compd. with
dicyclohexylphenylphosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 33906-65-9
CMF C24 H20 B . H
CCI CCS

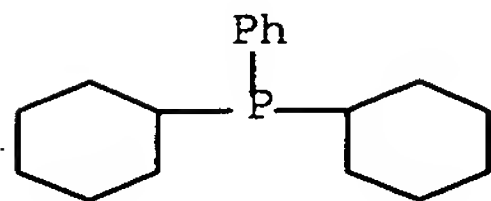


● H⁺

CM 2

CRN 6476-37-5

CMF C18 H27 P



REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 2 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2003:149747 ZCAPLUS Full-text

DOCUMENT NUMBER: 139:117473

TITLE: Sterically crowded diphosphinomethane ligands: molecular structures, UV-photoelectron spectroscopy and a convenient general synthesis of $t\text{Bu}_2\text{PCH}_2\text{PtBu}_2$ and related species

AUTHOR(S): Eisentraeger, Frank; Goethlich, Alexander; Gruber, Irene; Heiss, Helmut; Kiener, Christoph A.; Krueger, Carl; Ulrich Notheis, J.; Rominger, Frank; Scherhag, Gunter; Schultz, Madeleine; Straub, Bernd F.; Volland, Martin A. O.; Hofmann, Peter

CORPORATE SOURCE: Organisch-Chemisches Institut der Ruprecht-Karls-Universitaet Heidelberg, Heidelberg, D-69120, Germany

SOURCE: New Journal of Chemistry (2003), 27(3), 540-550
CODEN: NJCHE5; ISSN: 1144-0546

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:117473

AB A series of highly crowded sym. and unsym. diphosphinomethanes $\text{R}_2\text{PCH}_2\text{PR}_2$, important ligands in transition metal chemical and catalysis, namely $t\text{Bu}_2\text{PCH}_2\text{PtBu}_2$ (dtbpm, 1), $\text{Cy}_2\text{PCH}_2\text{PCy}_2$ (dcpm, 2), $t\text{Bu}_2\text{PCH}_2\text{PCy}_2$ (ctbpm, 3), $t\text{Bu}_2\text{PCH}_2\text{PiPr}_2$ (iptbpm, 4) and $t\text{Bu}_2\text{PCH}_2\text{PPh}_2$ (ptbpm, 5), was prepared in high yields, using a general and convenient route. Lithiation of $t\text{Bu}_2\text{PMe}$ gave $t\text{Bu}_2\text{PCH}_2\text{Li}$, which reacted with R_2PCl ($\text{R} = t\text{Bu}, \text{Cy}, i\text{Pr}, \text{Ph}$) resulting in high yields of 1, 3-5; the same route conveniently gave diphosphine 2. These compds. are crystalline solids at room temperature, besides of 4, which is a colorless liquid. Their mol. structures were determined by single crystal x-ray diffraction, along with that of the higher homolog of 1, $t\text{Bu}_2\text{CH}_2\text{CH}_2t\text{Bu}_2$ (dtbpe, 6). The solid-state structures of the dioxide $t\text{Bu}_2\text{P}(\text{O})\text{CH}_2\text{P}(\text{O})t\text{Bu}_2$ (7), and of two phosphonium cations derived from 1, protonated $[t\text{Bu}_2\text{P}(\text{H})\text{CH}_2\text{PtBu}_2]^+$ (8+) and the chlorophosphonium ion $[t\text{Bu}_2\text{P}(\text{Cl})\text{CH}_2\text{PtBu}_2]^+$ (9+), are also described and show a distinct structural influence of the tetracoordinate P centers. The gas phase UV-photoelectron spectra of the diphosphines 1-6 were measured. Their first two ionization potentials are nearly degenerate and all are in the low energy range from 7.5 to 7.8 eV. Comparison with related mono- and bidentate phosphines demonstrates that 1-6 are excellent σ -donors towards metals, in accord with their known coordination

chemical Mol. geometries and electronic structures of the diphosphines were studied by quantum chemical calcns. and are compared to experiment Unlike standard semiempirical methods (AM1, PM3, MNDO), which give rather poor min. structures and seem inadequate for such sterically crowded systems, ab initio calcns. (RHF/6-31G**) predict mol. geometries with reasonable accuracy and reflect the observed trends in exptl. ionization potentials.

IT 563539-90-2P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; preparation, structure and UPS of sterically crowded methylenediphosphines)

RN 563539-90-2 ZCAPLUS

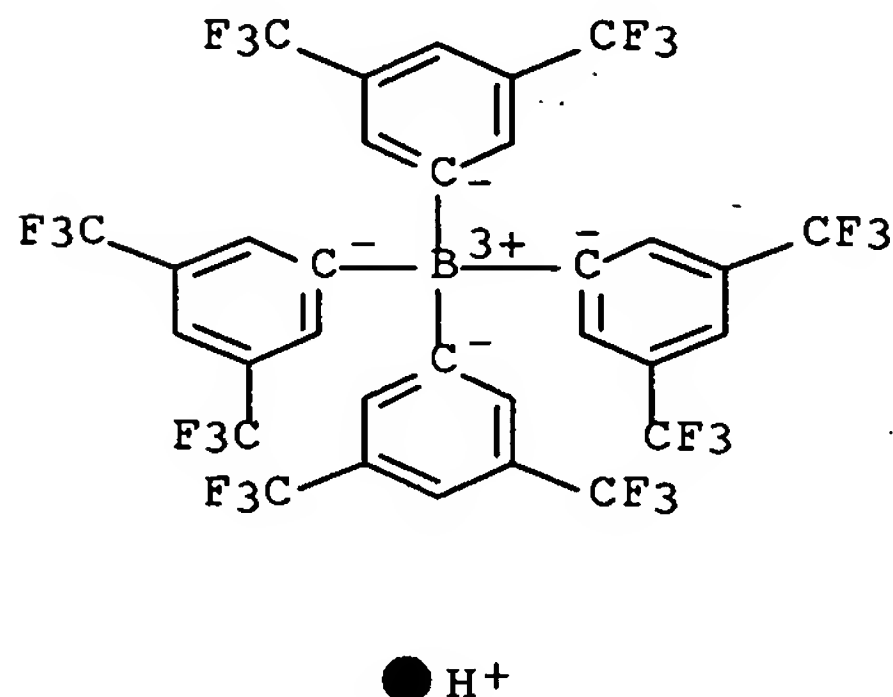
CN Borate(1-), tetrakis[3,5-bis(trifluoromethyl)phenyl]-, hydrogen, compd. with methylenebis[bis(1,1-dimethylethyl)phosphine] (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 121281-53-6

CMF C32 H12 B F24 . H

CCI CCS



CM 2

CRN 87648-10-0

CMF C17 H38 P2



REFERENCE COUNT: 82 THERE ARE 82 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 3 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:119055 ZCAPLUS Full-text

DOCUMENT NUMBER: 146:184915

TITLE: Method of preparing phosphonium compound for cyclic olefin polymerization

INVENTOR(S): Yoon, Sungcheol; Won, Young-Chul; Park, Young-Whan;

PATENT ASSIGNEE(S): Chun, Sung-Ho; Choi, Dai-Seung
 SOURCE: Lg Chem, Ltd., S. Korea
 PCT Int. Appl., 27pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007013759	A1	20070201	WO 2006-KR2925	20060725
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
KR 2007014035	A	20070131	KR 2006-69534	20060725
US 2007027277	A1	20070201	US 2006-492059	20060725
PRIORITY APPLN. INFO.:			KR 2005-67830	A 20050726
			KR 2006-69534	A 20060725

OTHER SOURCE(S): MARPAT 146:184915

AB Provided is a method of preparing a phosphonium compound by reacting a protic phosphonium compound represented by [(R1)P(R2)a(R2)b]HX and a salt compound. Therefore, a phosphonium compound used as a cocatalyst for the preparation of a polar cyclic olefin polymer can be produced at high yield.

IT **872885-08-0P**, Tricyclohexylphosphonium tetrakis(pentafluorophenyl)borate **872885-10-4P**, Tri-tert-butylphosphonium tetrakis(pentafluorophenyl)borate
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)
 (method of preparing phosphonium compound for cyclic olefin polymerization)

RN 872885-08-0 ZCAPLUS

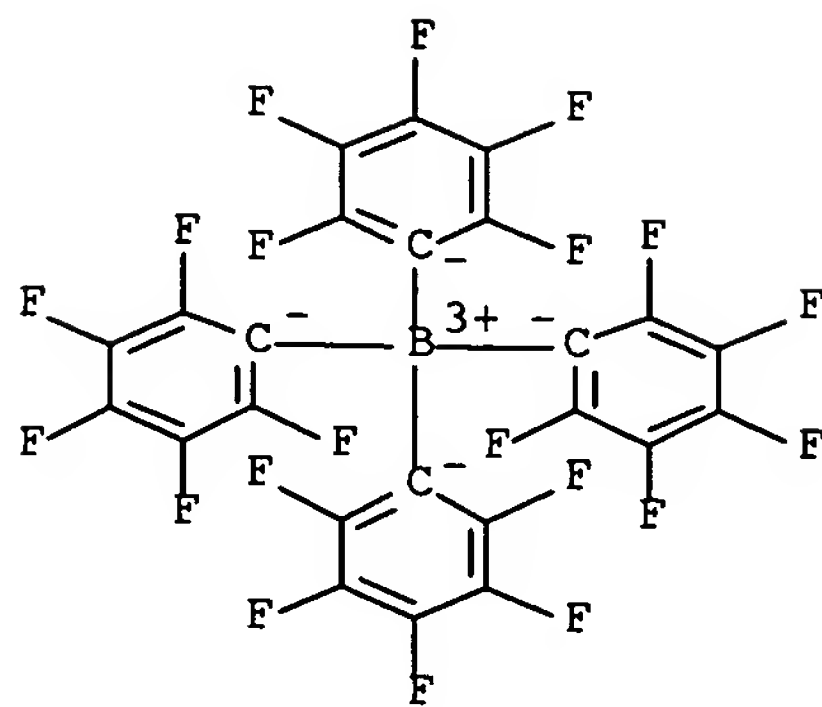
CN Borate(1-), tetrakis(pentafluorophenyl)-, hydrogen, compd. with tricyclohexylphosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 118611-98-6

CMF C24 B F20 . H

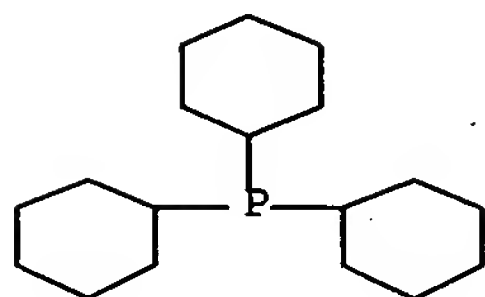
CCI CCS



CM 2

CRN 2622-14-2

CMF C18 H33 P



RN 872885-10-4 ZCAPLUS

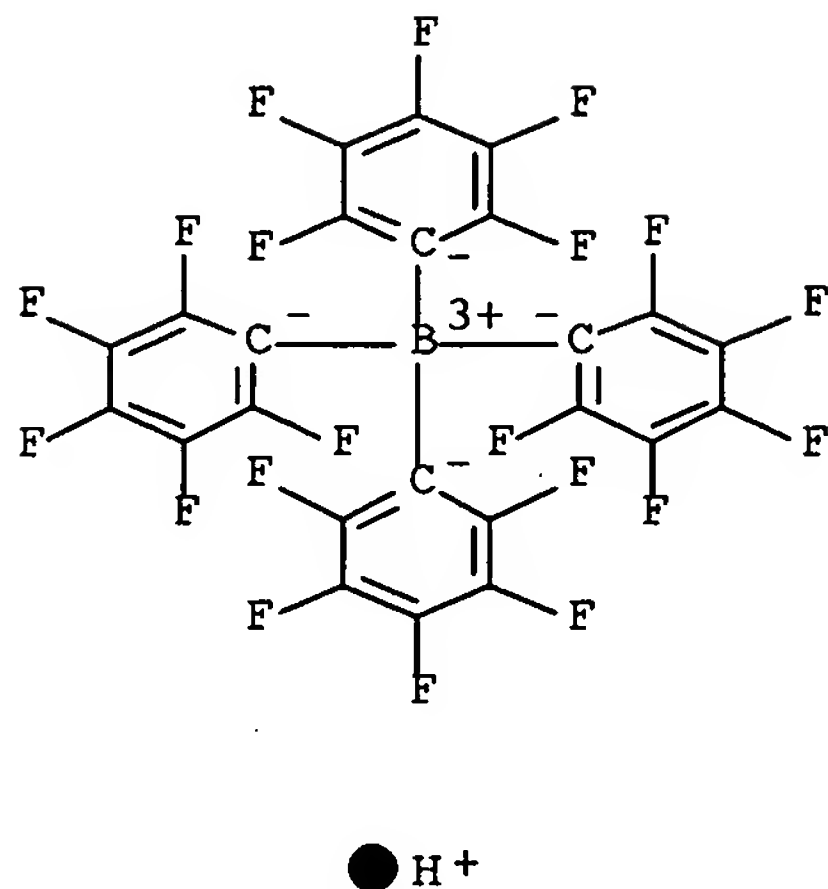
CN Borate(1-), tetrakis(pentafluorophenyl)-, hydrogen, compd. with
tris(1,1-dimethylethyl)phosphine (1:1) (9CI) (CA INDEX NAME)

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CRN 118611-98-6

CMF C24 B F20 . H

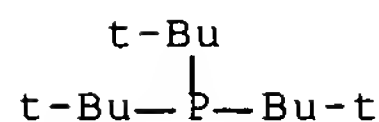
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CM 2

CRN 13716-12-6

CMF C12 H27 P



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 4 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:830082 ZCAPLUS Full-text

DOCUMENT NUMBER: 147:448289

TITLE: Tuning Lewis acidity using the reactivity of "frustrated Lewis pairs": facile formation of phosphine-boranes and cationic phosphonium-boranes
 AUTHOR(S): Welch, Gregory C.; Cabrera, Lourdes; Chase, Preston A.; Hollink, Emily; Masuda, Jason D.; Wei, Pingrong; Stephan, Douglas W.

CORPORATE SOURCE: Department of Chemistry & Biochemistry, University of Windsor, Windsor, ON, N9B3P4, Can.

SOURCE: Dalton Transactions (2007), (31), 3407-3414
 CODEN: DTARAF; ISSN: 1477-9226

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The concept of "frustrated Lewis pairs" involves donor and acceptor sites in which steric congestion precludes Lewis acid-base adduct formation. In the case of sterically demanding phosphines and boranes, this lack of self-quenching prompts nucleophilic attack at a carbon para to B followed by fluoride transfer affording zwitterionic phosphonium borates [R₃P(C₆F₄)BF(C₆F₅)₂] and [R₂PH(C₆F₄)BF(C₆F₅)₂]. These can be easily transformed into the cationic phosphonium-boranes [R₃P(C₆F₄)B(C₆F₅)₂]⁺ and [R₂PH(C₆F₄)B(C₆F₅)₂]⁺ or the neutral phosphino-boranes R₂P(C₆F₄)B(C₆F₅)₂. This new reactivity provides a modular route to a family of boranes in which the

steric features about the Lewis acidic center remains constant and yet the variation in substitution provides a facile avenue for the tuning of the Lewis acidity. Employing the Gutmann-Beckett and Childs methods for determining Lewis acid strength, it is demonstrated that the cationic boranes are much more Lewis acidic than $B(C_6F_5)_3$, while the acidity of the phosphine-boranes is diminished.

IT **947699-01-6P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(tuning Lewis acidity using reactivity of frustrated Lewis pairs in
facile formation of phosphine boranes and cationic phosphonium boranes)

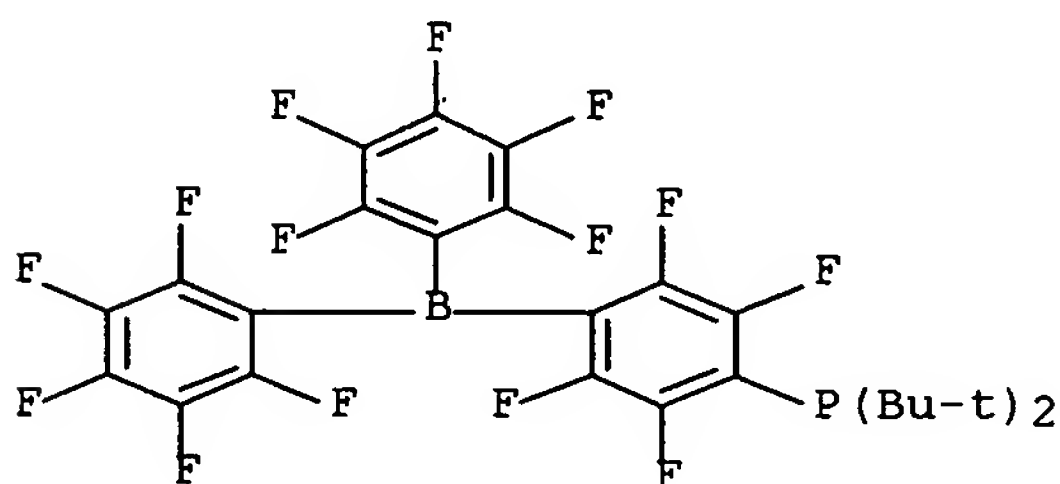
RN 947699-01-6 ZCAPLUS

CN INDEX NAME NOT YET ASSIGNED

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CRN 947699-00-5

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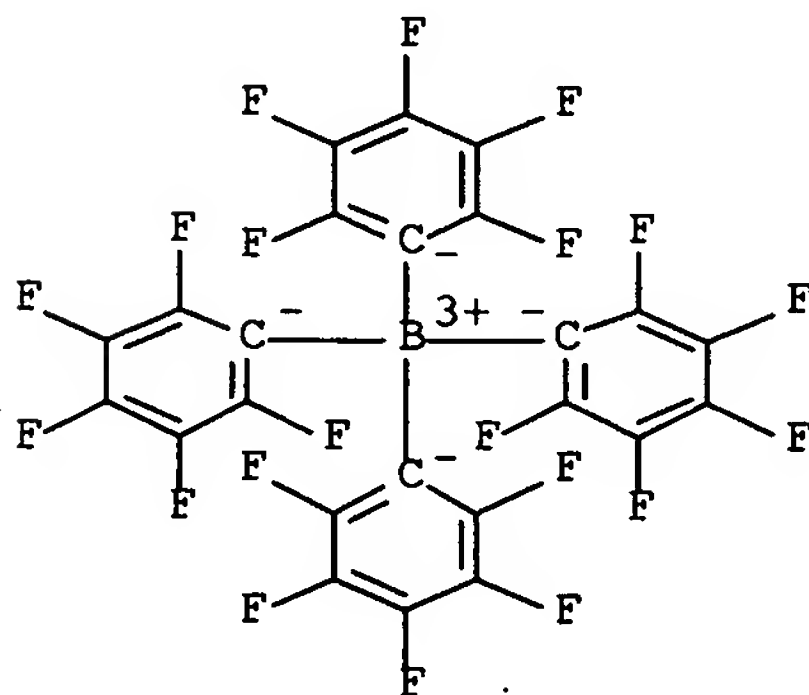


CM 2

CRN 118611-98-6

CMF C24 B F20 . H

CCI CCS



● H⁺

REFERENCE COUNT:

83

THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS

. RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 5 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:673982 ZCAPLUS Full-text
 DOCUMENT NUMBER: 145:146211
 TITLE: Manufacture of photoreactive polymers
 INVENTOR(S): Kim, Heon; Chun, Sung-Ho; Lee, Keon-Woo; Oh,
 Sung-Joon; Kim, Kyungjun; Jo, Jungho; Lee, Byung-Hyun;
 Lim, Min-Young; Jeong, Hye-Won
 PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
 SOURCE: PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006073270	A1	20060713	WO 2006-KR39	20060105
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM KR 2006080552 A 20060710 KR 2006-1087 20060104 US 2006160970 A1 20060720 US 2006-325414 20060105 EP 1833777 A1 20070919 EP 2006-702007 20060105 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR PRIORITY APPLN. INFO.: KR 2005-833 A 20050105 KR 2006-1087 A 20060104 WO 2006-KR39 W 20060105				

OTHER SOURCE(S): MARPAT 145:146211

AB Provided are a photoreactive polymer that includes a multi- cyclicmulticyclic compound at as its main chain and a method of preparing the same. The photoreactive polymer exhibits excellent thermal stability since it includes a multi-cyclicmulticyclic compound having a high glass transition temperature at as its main chain. In addition, the photoreactive polymer has a relatively large vacancy so that a photoreactive group can move relatively freely in the main chain therein. As a result, a slow photoreaction rate, which is a disadvantage of a conventional polymer material used to form an alignment layer for a liquid crystal display device, can be overcome.

IT 872885-08-0

RL: CAT (Catalyst use); USES (Uses)
 (manufacture of photoreactive polymers)

RN 872885-08-0 ZCAPLUS

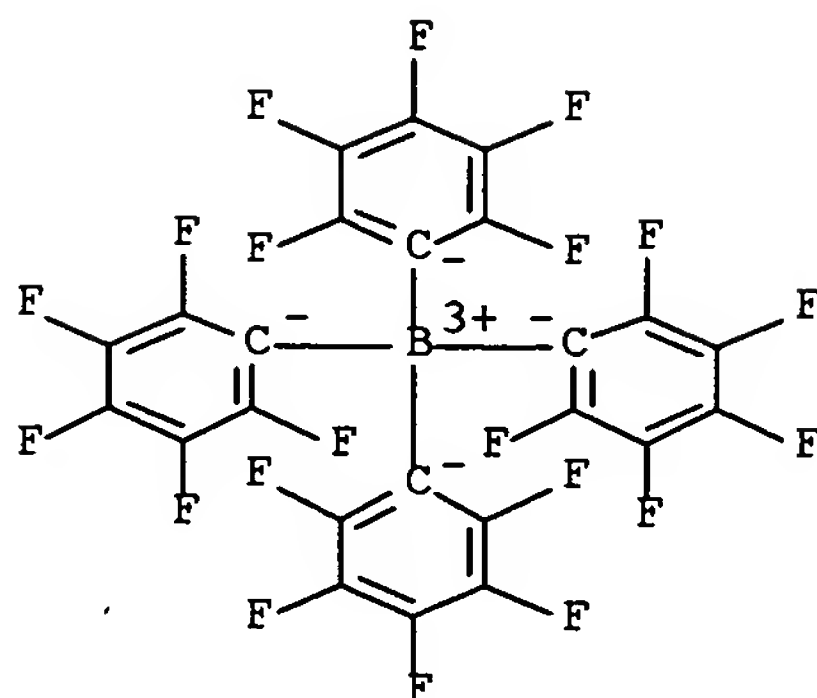
CN Borate(1-), tetrakis(pentafluorophenyl)-, hydrogen, compd. with
 tricyclohexylphosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 118611-98-6

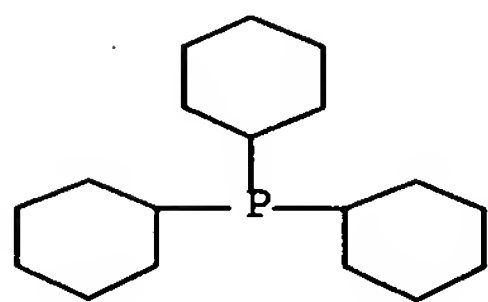
10/580699

CMF C24 B F20 . H
CCI CCS



CM 2

CRN 2622-14-2
CMF C18 H33 P



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 6 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:31699 ZCAPLUS Full-text

DOCUMENT NUMBER: 144:108770

TITLE: Method of producing cyclic olefin polymers having polar functional groups, olefin polymer produced using the method and optical anisotropic film comprising the same

INVENTOR(S): Yoon, Sung-Cheol; Won, Young-Chul; Park, Young-Whan; Chun, Sung-Ho; Choi, Dai-Seung; Kim, Won-Kook; Lim, Tae-Sun; Kim, Heon; Lee, Jung-Min; Paik, Kyung-Lim

PATENT ASSIGNEE(S): LG Chem. Ltd., S. Korea

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

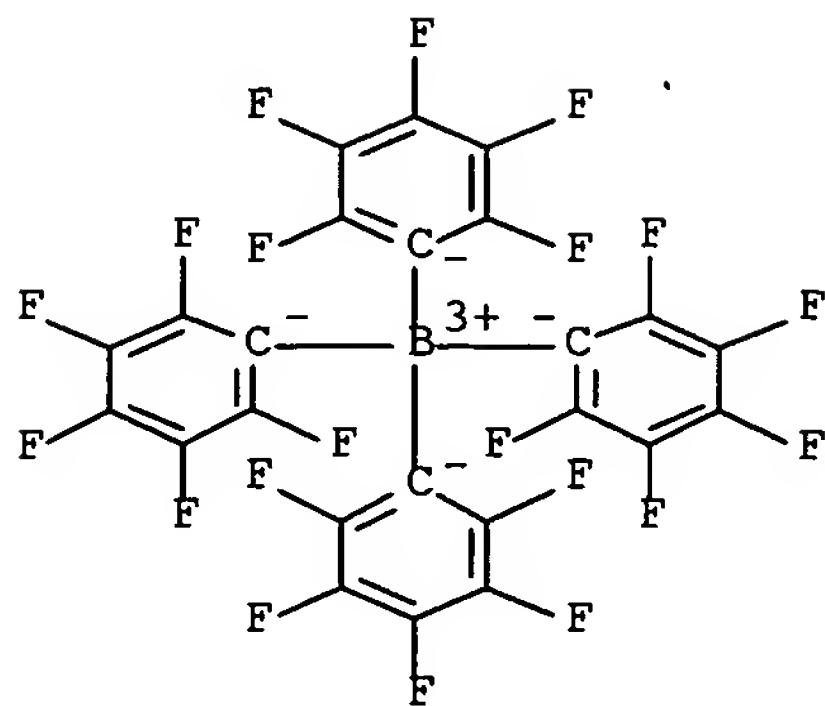
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

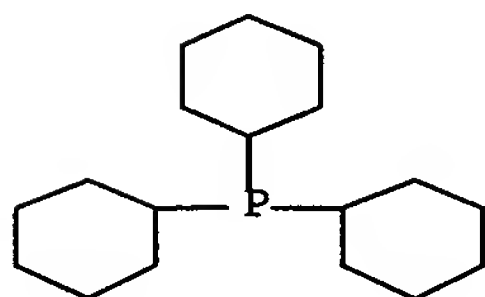
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006004376	A1	20060112	WO 2005-KR2149	20050705
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CN 1910210	A	20070207	CN 2005-80002113	20050705
EP 1765887	A1	20070328	EP 2005-765936	20050705
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
JP 2007517958	T	20070705	JP 2006-549154	20050705
IN 2006DN03675	A	20070803	IN 2006-DN3675	20060626
KR 2007028488	A	20070312	KR 2007-7948	20070125
PRIORITY APPLN. INFO.:				
			KR 2004-52612	A 20040707
			KR 2004-74307	A 20040916
			WO 2005-KR2149	W 20050705
			WO 2005-KR2194	W 20050705
			KR 2005-61152	A3 20050707
OTHER SOURCE(S): MARPAT 144:108770				
AB	A method of producing a cyclic olefin polymer having a polar functional group and a high mol. weight with a high yield in which a catalyst is not deactivated due to polar functional groups, moisture and oxygen is provided. According to the olefin polymerization method, deactivation of a catalyst due to polar functional groups of monomers can be prevented, and thus a polyolefin having a high mol. weight can be prepared with a high yield, and the ratio of catalyst to monomer can be less than 1/5000 due to good activity of the catalyst, and thus removal of catalyst residues is not required.			
IT	872885-08-0P , Tricyclohexylphosphonium tetrakis(pentafluorophenyl)borate 872885-10-4P , Tri-tert-butylphosphonium tetrakis(pentafluorophenyl)borate RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses) (method of producing cyclic olefin polymers having polar functional groups, olefin polymer produced using the method and optical anisotropic film comprising the same)			
RN	872885-08-0 ZCAPLUS			
CN	Borate(1-), tetrakis(pentafluorophenyl)-, hydrogen, compd. with tricyclohexylphosphine (1:1) (9CI) (CA INDEX NAME)			
CM	1			
CRN	118611-98-6			
CMF	C24 B F20 . H			
CCI	CCS			



CM 2

CRN 2622-14-2

CMF C18 H33 P



RN 872885-10-4 ZCAPLUS

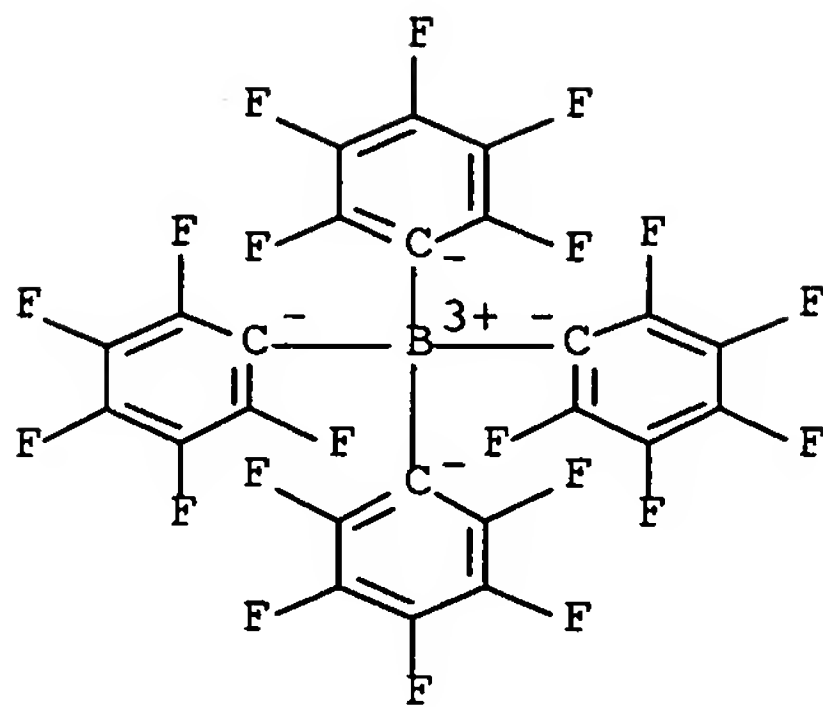
CN Borate(1-), tetrakis(pentafluorophenyl)-, hydrogen, compd. with
tris(1,1-dimethylethyl)phosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 118611-98-6

CMF C24 B F20 . H

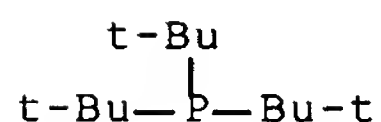
CCI CCS



CM 2

CRN 13716-12-6

CMF C12 H27 P



REFERENCE COUNT:

7

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 7 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:231929 ZCAPLUS Full-text

DOCUMENT NUMBER: 144:293248

TITLE: Catalyst system for polymerizing cyclic olefin having polar functional group, polymerizing method using the catalyst system, olefin polymer produced by the method and optical anisotropic film comprising the olefin polymer

INVENTOR(S): Yoon, Sung Cheol; Won, Young Chul; Park, Young Whan; Chun, Sung Ho; Choi, Dai Seung; Kim, Won Kook; Lim, Taesun; Kim, Heon; Lee, Jung Min; Paik, Kyung Lim

PATENT ASSIGNEE(S): S. Korea

SOURCE: U.S. Pat. Appl. Publ., 20 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006058477	A1	20060316	US 2005-227093	20050916
WO 2006031067	A1	20060323	WO 2005-KR3054	20050915
WO 2006031067	A9	20061214		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

EP 1794197 A1 20070613 EP 2005-808795 20050915

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

CN 101023107 A 20070822 CN 2005-80031322 20050915

KR 2007028488 A 20070312 KR 2007-7948 20070125

IN 2007DN02037 A 20070817 IN 2007-DN2037 20070315

PRIORITY APPLN. INFO.:

KR 2004-74307 A 20040916

KR 2005-61152 A 20050707

KR 2004-52612 A 20040707

WO 2005-KR3054 W 20050915

OTHER SOURCE(S): MARPAT 144:293248

AB A catalyst system capable of producing a cyclic olefin polymer having a polar functional group and a high mol. weight with a high yield in which a catalyst is not deactivated due to polar functional groups of monomers, and a method of producing polymers using the same are provided. The catalyst system for polymerization of olefin according to the invention has good thermal and chemical stability, and thus, in the method of preparing polyolefin using the catalyst system, the deactivation of a catalyst due to a polar functional group of the monomer is prevented, and thus a high yield of the cyclic olefin polymer with a high mol. weight can be obtained when a ratio of the catalyst to the monomer is 1:5000, and the removal of a catalyst residue is not required. The catalyst system is based on a complex of Ni, Pd, or Pt, a hydrocarbon group containing S, O, and N atoms bonded to the metal, and, optionally, another hydrocarbon group and a cocatalyst based on phosphonium compds. optionally having organic groups with O, S, Si, or N bonded to the P. Thus, 2-(3-acetyloxypropyl)-5-norbornene was polymerized in the presence of Pd(OAc)₂ and tricyclohexylphosphonium tetrakis(pentafluorophenyl)borate in CH₂Cl₂ 18 h at 90° to give polymer with weight-average mol. weight 250,071.

IT **872885-08-0P**, Tricyclohexylphosphonium

tetrakis(pentafluorophenyl)borate **872885-10-4P**,

Tri-tert-butylphosphonium tetrakis(pentafluorophenyl)borate

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(catalysts containing palladium, nickel, or platinum compds. and phosphonium compds. polymerizing cyclic olefins having polar functional groups for optical anisotropic films)

RN 872885-08-0 ZCAPLUS

CN Borate(1-), tetrakis(pentafluorophenyl)-, hydrogen, compd. with tricyclohexylphosphine (1:1) (9CI) (CA INDEX NAME)

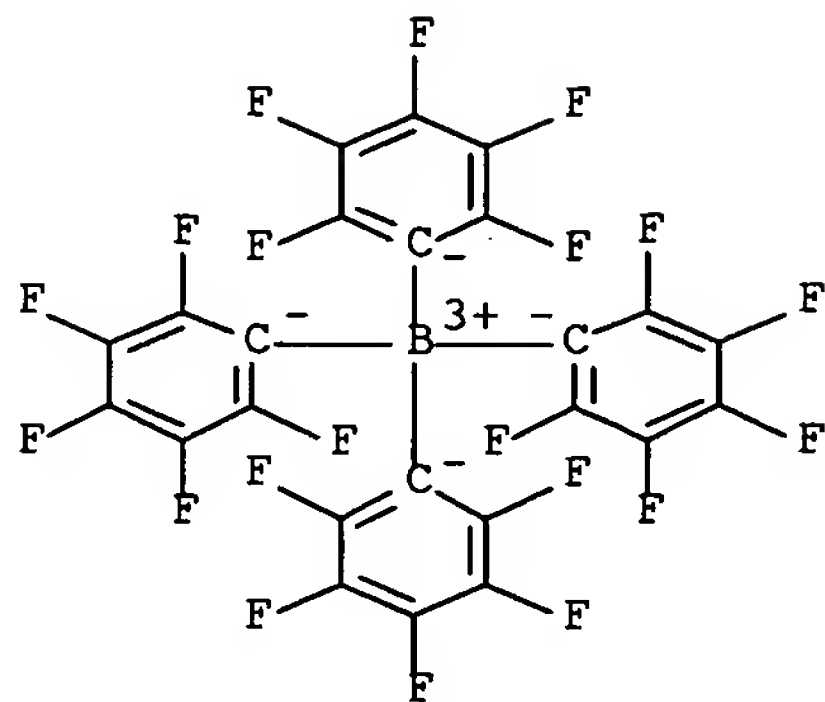
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CMF C24 B F20 . H

CCI CCS

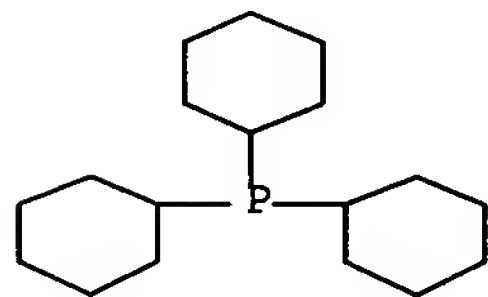
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CM 2

CRN 2622-14-2

CMF C18 H33 P



RN 872885-10-4 ZCAPLUS

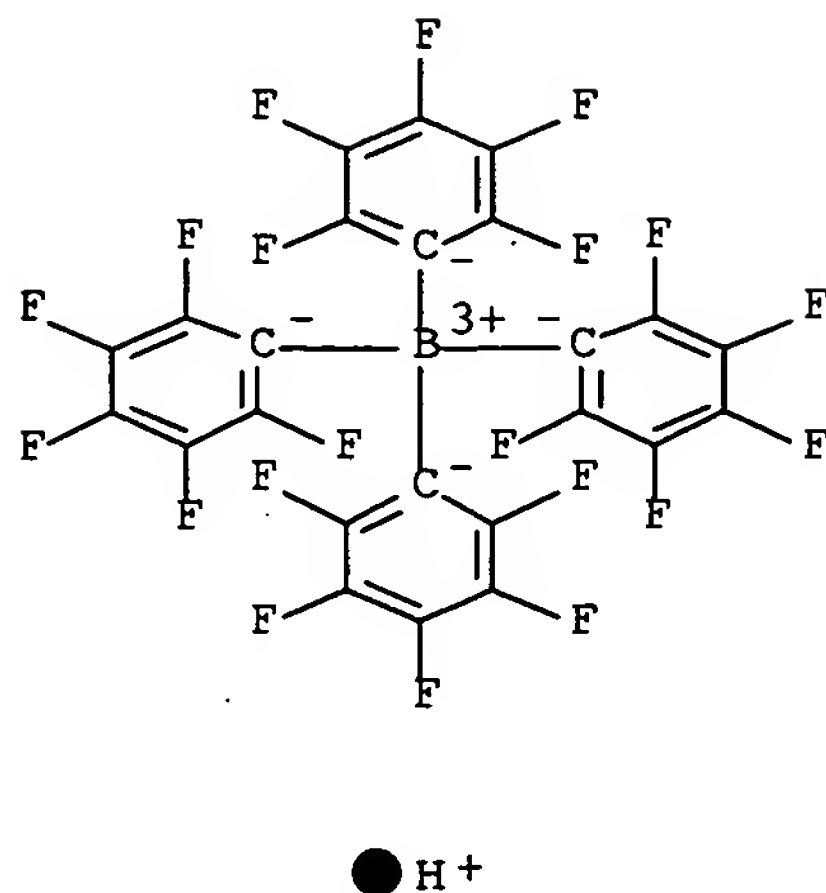
CN Borate(1-), tetrakis(pentafluorophenyl)-, hydrogen, compd. with
tris(1,1-dimethylethyl)phosphine (1:1) (9CI) (CA INDEX NAME)

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CRN 118611-98-6

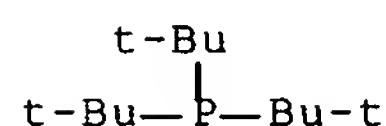
CMF C24 B F20 . H

CCI CCS



CM 2

CRN 13716-12-6
CMF C12 H27 P



L51 ANSWER 8 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:997731 ZCAPLUS Full-text

DOCUMENT NUMBER: 143:460249

TITLE: Exploring the Influence of Ancillary Ligand Charge and Geometry on the Properties of New Coordinatively Unsaturated Cp^{*}(κ²-P,N)Ru⁺ Complexes: Linkage Isomerism, Double C-H Bond Activation, and Reversible α-Hydride Elimination

AUTHOR(S): Rankin, Matthew A.; McDonald, Robert; Ferguson, Michael J.; Stradiotto, Mark

CORPORATE SOURCE: Department of Chemistry, Dalhousie University, Halifax, NS, B3H 4J3, Can.

SOURCE: Organometallics (2005), 24(21), 4981-4994
CODEN: ORGND7; ISSN: 0276-7333

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 143:460249

AB The synthesis, characterization, and reactivity properties of new Cp^{*}Ru complexes supported by κ²-P,N-1-PiPr₂-2-NMe₂-indene (1a), κ²-P,N-2-NMe₂-3-PiPr₂-indene (1b), and κ²-P,N-2-NMe₂-3-PiPr₂-indenide (1) are described (Cp^{*} = η⁵-C₅Me₅). Addition of 1a to (Cp^{*}RuCl)₄ afforded Cp^{*}Ru(Cl)(κ²-P,N-1a) (2a, 92%), which in turn was transformed into Cp^{*}Ru(Cl)(κ²-P,N-1b) (2b, 85%). Treatment of either 2a or 2b with AgBF₄ in MeCN provided the corresponding 18-electron, base-stabilized cation [Cp^{*}Ru(MeCN)(κ²-P,N-1a,b)]⁺BF₄⁻ (3a, 89%; 3b, 91%). In the pursuit of the analogous MeCN-free, 16-electron species (4a or

4b), complexes 2a or 2b were treated with $\text{Li}(\text{Et}_2\text{O})_2.5\text{B}(\text{C}_6\text{F}_5)_4$. In the case of 2a, the linkage isomer $[\text{Cp}^*\text{Ru}(\eta^6\text{-1a})] + \text{B}(\text{C}_6\text{F}_5)_4^-$ (endo-4c, 74%) was obtained; exposure of this complex to NEt_3 afforded $[\text{Cp}^*\text{Ru}(\eta^6\text{-1b})] + \text{B}(\text{C}_6\text{F}_5)_4^-$ (4d, 85%). In contrast, chloride abstraction from 2b generated the C-H bond activation product 4e (83%); variable-temperature NMR data revealed that the apparent cyclometalation of 4b to give 4e is reversible. While the base-stabilized zwitterion $5a \cdot \text{MeCN}$ was successfully prepared (83%), attempts to generate the coordinatively unsatd. zwitterion $\text{Cp}^*\text{Ru}(\kappa^2\text{-P,N-1})$ (5a) instead gave the isomeric hydridocarbenes 5b (80%) and 5c (84%). The apparent rearrangement of 5a to a hydridocarbene is noteworthy, as it represents a remarkably facile, ligand-assisted double geminal C-H bond activation process. Also, data obtained from 1-dimensional- and 2-dimensional-EXSY NMR expts. involving 5c provided compelling evidence for what appears to be the 1st documented interconversion of $\text{Ru}(\text{H})\text{:CH}$ and Ru-CH_2 groups by way of reversible α -hydride elimination. In keeping with this dynamic process, treatment of 5c with PPh_2 afforded the alkylruthenium adduct 6 (70%). Single-crystal x-ray diffraction data are provided for 2a, 2b, 3a, 3b $\cdot 1.5\text{C}_5\text{H}_{12}$, 4d, 4e, $(5a \cdot \text{MeCN}) \cdot 0.5\text{MeCN}$, 5c, and 6 $\cdot 0.5\text{C}_5\text{H}_{12}$.

IT 869006-09-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; preparation, structure, linkage isomerism, double C-H bond activation, and reversible α -hydride elimination of coordinatively unsatd. ruthenium P-N indenide metallacyclic complexes)

RN 869006-09-7 ZCAPLUS

CN Ruthenium(1+), [(3a,4,5,6,7,7a- η)-3-[bis(1-methylethyl)phosphino]-N,N-dimethyl-1H-inden-2-amine][(1,2,3,4,5- η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]-, tetrakis(pentafluorophenyl)borate(1-) (9CI) (CA INDEX NAME)

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CRN 869006-08-6

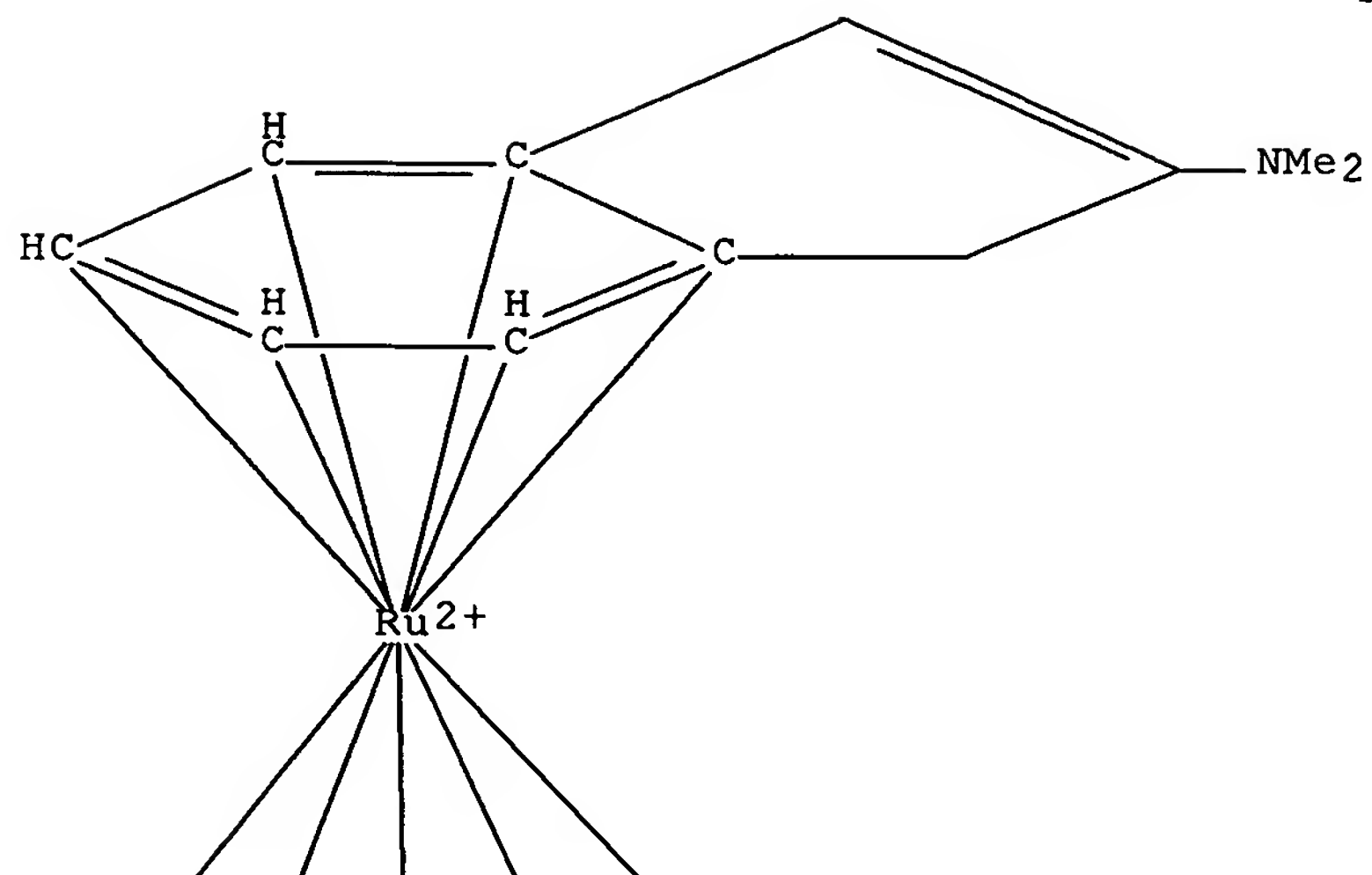
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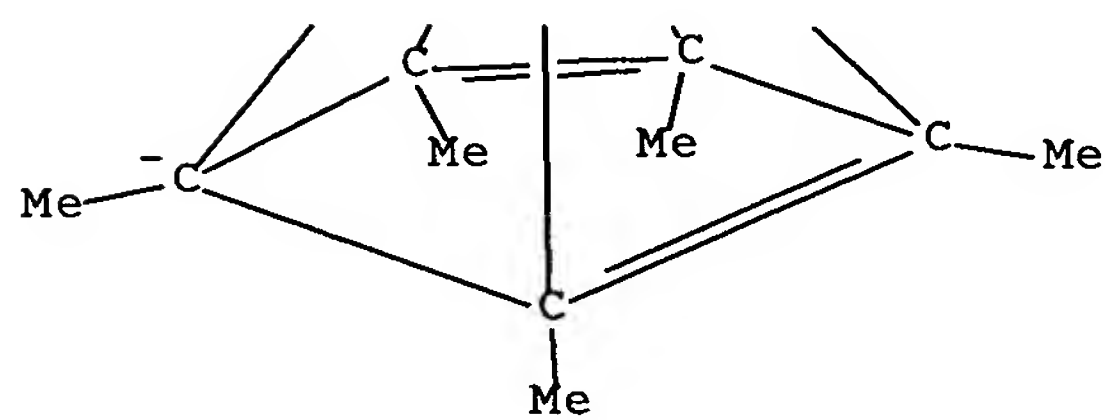
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P(Pr-i)₂

PAGE 2-A



PAGE 3-A

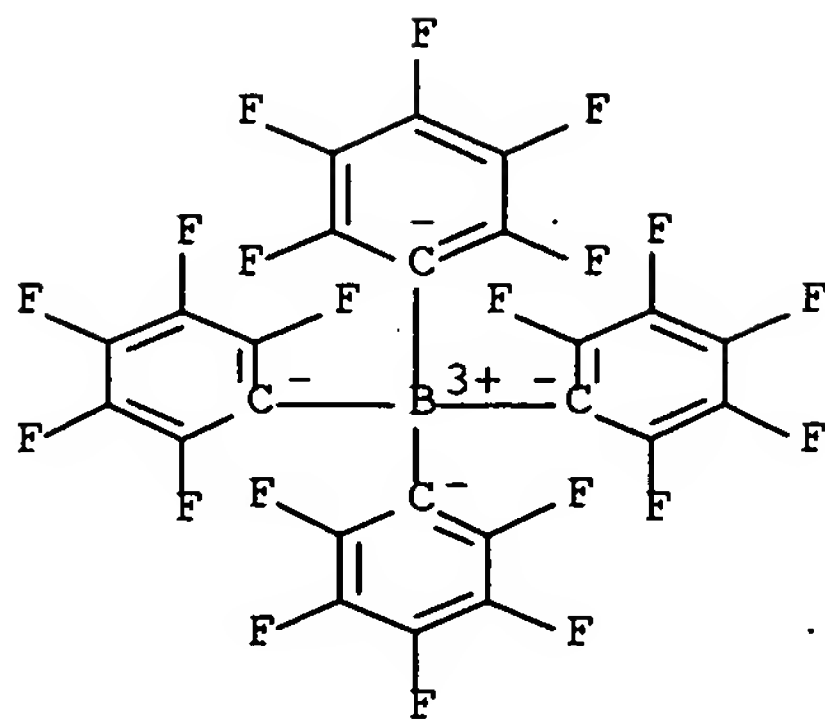


CM 2

CRN 47855-94-7

CMF C24 B F20

CCI CCS



IT 869006-05-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation, structure, linkage isomerism, double C-H bond activation, and reversible α -hydride elimination of coordinatively unsatd.

ruthenium P-N indenide metallacyclic complexes)

RN 869006-05-3 ZCAPLUS

CN Ruthenium(1+), [(3a,4,5,6,7,7a- η)-1-[bis(1-methylethyl)phosphino]-N,N-dimethyl-1H-inden-2-amine] [(1,2,3,4,5- η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]-, stereoisomer, tetrakis(pentafluorophenyl)borate(1-) (9CI) (CA INDEX NAME)

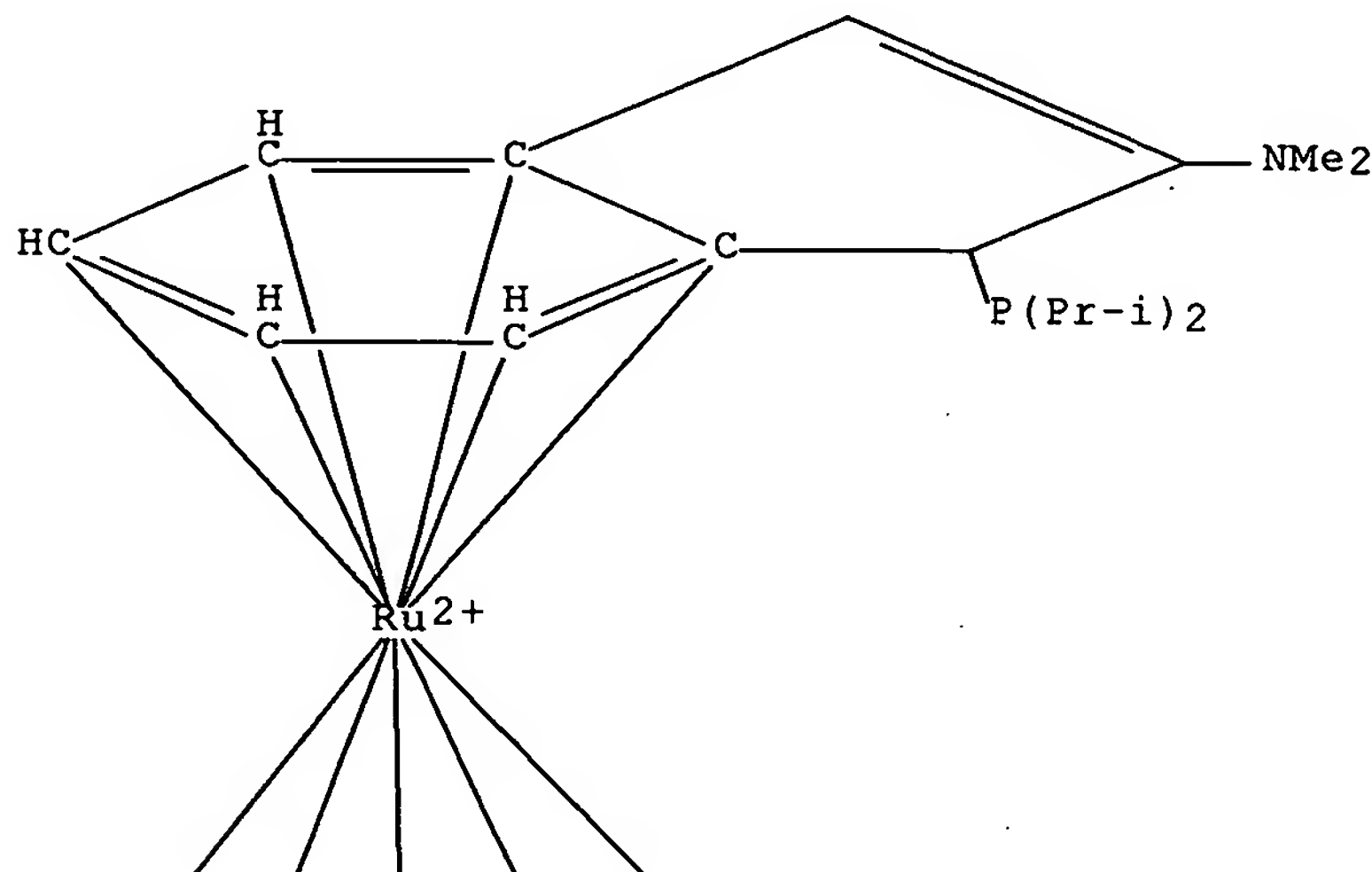
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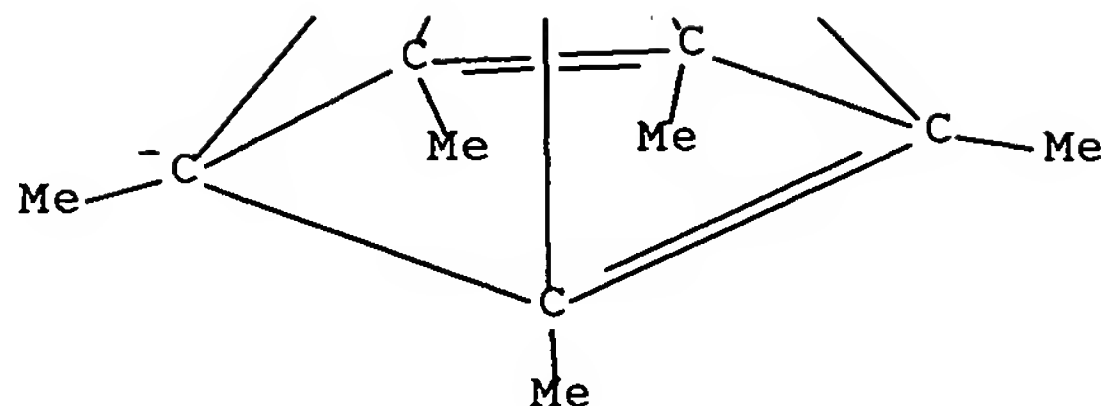
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CMF C27 H41 N P Ru

CCI CCS

PAGE 1-A



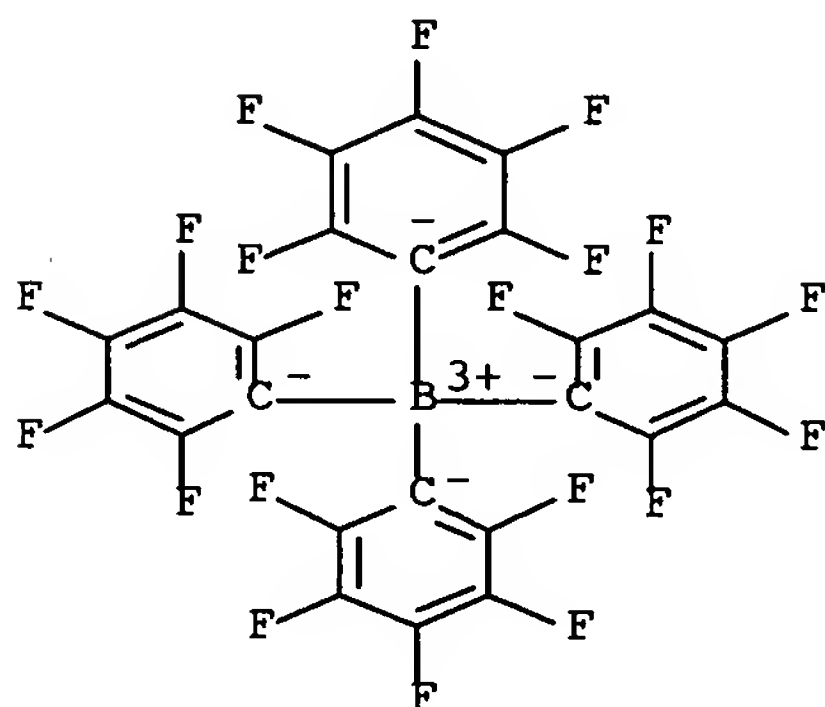


CM 2

CRN 47855-94-7

CMF C24 B F20

CCI CCS



REFERENCE COUNT: 87 THERE ARE 87 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 9 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:283905 ZCAPLUS Full-text

DOCUMENT NUMBER: 143:18679

TITLE: Dihydrogen Complexes of Rhodium: $[\text{RhH}_2(\text{H}_2)_x(\text{PR}_3)_2]^+$ ($\text{R} = \text{Cy}, \text{iPr}; x = 1, 2$)

AUTHOR(S): Ingleson, Michael J.; Brayshaw, Simon K.; Mahon, Mary F.; Ruggiero, Giuseppe D.; Weller, Andrew S.

CORPORATE SOURCE: Department of Chemistry, University of Bath, Bath, BA2 7AY, UK

SOURCE: Inorganic Chemistry (2005), 44(9), 3162-3171
CODEN: INOCAJ; ISSN: 0020-1669

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 143:18679

AB Addition of H_2 (4 atm at 298 K) to $[\text{Rh}(\text{nbd})(\text{PR}_3)_2][\text{BArF}_4]$ [$\text{R} = \text{Cy}, \text{iPr}$] affords Rh(III) dihydride/dihydrogen complexes. For $\text{R} = \text{Cy}$, complex $[\text{Rh}(\text{H})_2(\eta^2\text{-H}_2)_2(\text{PCy}_3)_2][\text{BArF}_4]$ (1a) results, which was characterized by low-

temperature NMR expts. An x-ray diffraction study on 1a confirmed the {Rh(PCy3)2} core structure, but due to a poor data set, the H ligands were not located. DFT calcns. at the B3LYP/DZVP level support the formulation as a Rh(III) dihydride/dihydrogen complex with cis hydride ligands. For R = iPr, the equivalent species, [Rh(H)2(η2-H2)2(PiPr3)2][BArF4] (2a), is formed, along with another complex that was spectroscopically identified as the mono-dihydrogen, bis-hydride solvent complex [Rh(H)2(η2-H2)(CD2Cl2)(PiPr3)2][BArF4] (2b). The analogous complex with PCy3 ligands, [Rh(H)2(η2-H2)(CD2Cl2)(PCy3)2][BArF4] (1b), can be observed by reducing the H2 pressure to 2 atm (at 298 K). Under vacuum, the dihydrogen ligands are lost in these complexes to form the spectroscopically characterized species, tentatively identified as the bis hydrides [Rh(H)2(L)2(PR3)2][BArF4] (1c, R = Cy; 2c, R = iPr; L = CD2Cl2 or agostic interaction). Exposure of 1c or 2c to a H2 atmosphere regenerates the dihydrogen/bis-hydride complexes, while adding MeCN affords the bis-hydride MeCN adduct complexes [Rh(H)2(NCMe)2(PR3)2][BArF4]. The dihydrogen complexes lose [HPR3][BArF4] at or just above ambient temperature, suggested to be by heterolytic splitting of coordinated H2, to ultimately afford the dicationic cluster compds. [Rh6(PR3)6(μ-H)12][BArF4]2 in moderate yield.

IT 852244-08-7 852244-09-8

RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)

(acid dissociation constant and formation in heterolytic splitting of dihydrogen in rhodium dihydrogen hydride phosphine complexes)

RN 852244-08-7 ZCAPLUS

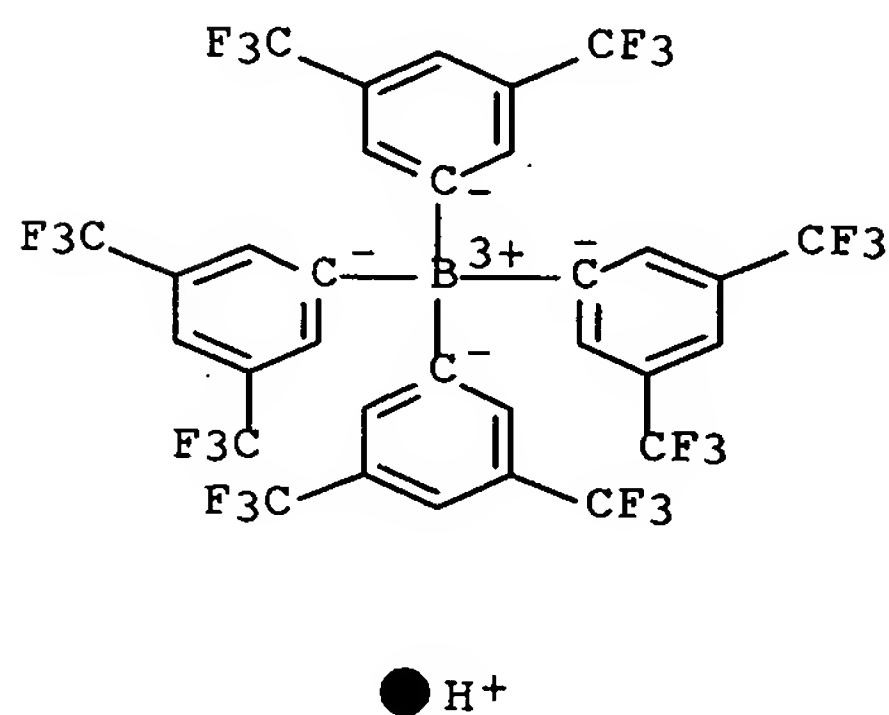
CN Borate(1-), tetrakis[3,5-bis(trifluoromethyl)phenyl]-, hydrogen, compd. with tricyclohexylphosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 121281-53-6

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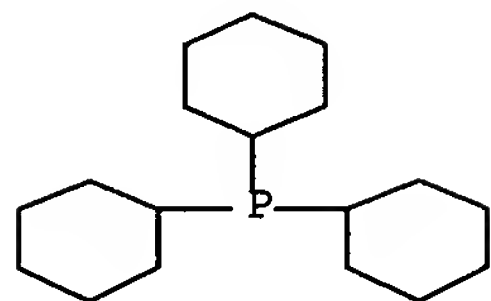
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CM 2

CRN 2622-14-2

CMF C18 H33 P



RN 852244-09-8 ZCAPLUS

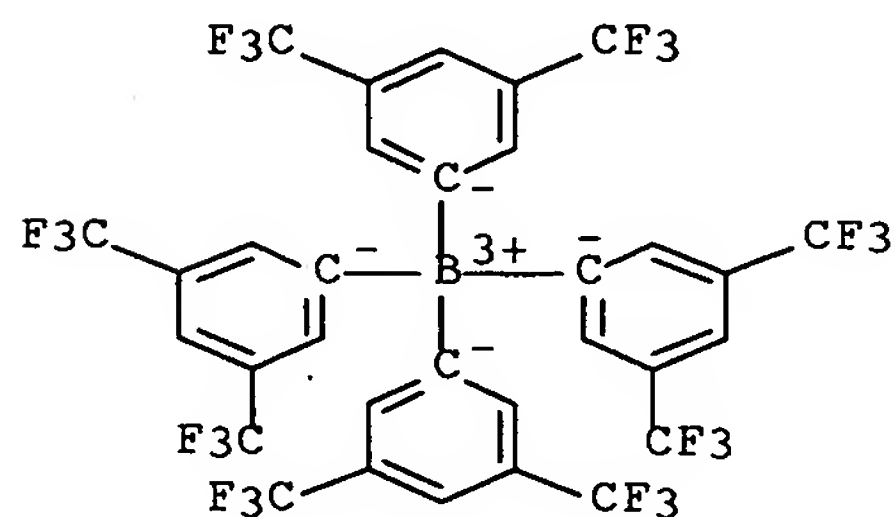
CN Borate(1-), tetrakis[3,5-bis(trifluoromethyl)phenyl]-, hydrogen, compd.
with tris(1-methylethyl)phosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 121281-53-6

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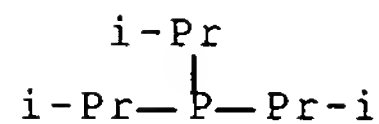
CCI CCS

● H⁺

CM 2

CRN 6476-36-4

CMF C9 H21 P



REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 10 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:952941 ZCAPLUS Full-text

DOCUMENT NUMBER: 140:146275

TITLE: Coordinating Anions: (Phosphino)tetraphenylborate
Ligands as New Reagents for Synthesis

AUTHOR(S): Thomas, Christine M.; Peters, Jonas C.

CORPORATE SOURCE: Division of Chemistry and Chemical Engineering, Arnold

and Mabel Beckman Laboratories of Chemical Synthesis,
California Institute of Technology, Pasadena, CA,
91125, USA

SOURCE: Inorganic Chemistry (2004), 43(1), 8-10
CODEN: INOCAJ; ISSN: 0020-1669
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:146275

AB Anionic, electron-releasing phosphines that incorporate a borate counter-anion within the ligand framework are promising reagents for organometallic catalysis. This report describes the synthesis of a new class of monodentate tertiary phosphines built upon the commonly employed tetraphenylborate anion. These new phosphines are highly stable and strongly electron-releasing and readily coordinate transition metals. Moreover, they are promising reagents for catalysis, as demonstrated by their ability to promote the Suzuki cross-coupling of aryl chloride substrates. Thus, lithiation of m-BrC₆H₄PiPr₂ (preparation given) with t-BuLi in THF/pentane followed by sequential treatment with Ph₃B and Bu₄NBr gave 48% title ligand, [Bu₄N][Ph₃BPm-iPr₂] (crystal structure), which cocatalyzes Suzuki cross-coupling reaction of PhB(OH)₂ with 1,4-dichlorobenzene in the presence of Pd₂(dba)₃ to give 4-chlorobiphenyl.

IT **651329-77-0P**

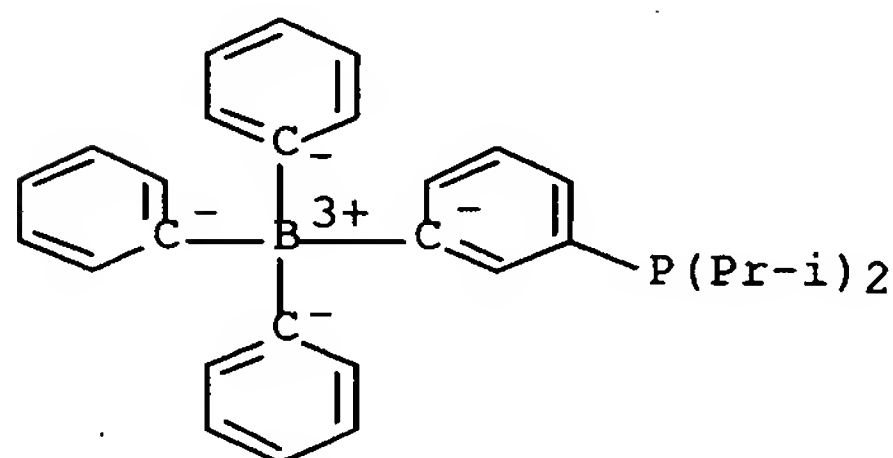
RL: CAT (Catalyst use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (crystal structure; preparation of (phosphino)tetraphenylborate coordinating anion ligands as cocatalysts for transition metal catalyzed Suzuki cross-coupling reaction of arylboronic acid with aryl halide)

RN 651329-77-0 ZCAPLUS

CN 1-Butanaminium, N,N,N-tributyl-, (T-4)-[3-[bis(1-methylethyl)phosphino]phenyl]triphenylborate(1-) (9CI) (CA INDEX NAME)

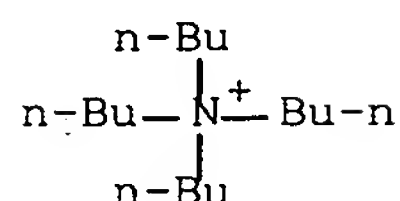
CM 1

CRN 651329-76-9
CMF C30 H33 B P
CCI CCS



CM 2

CRN 10549-76-5
CMF C16 H36 N



IT 651330-05-1P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; preparation of (phosphino)tetraphenylborate
coordinating

anion ligands as cocatalysts for transition metal catalyzed Suzuki
cross-coupling reaction of arylboronic acid with aryl halide)

RN 651330-05-1 ZCAPLUS

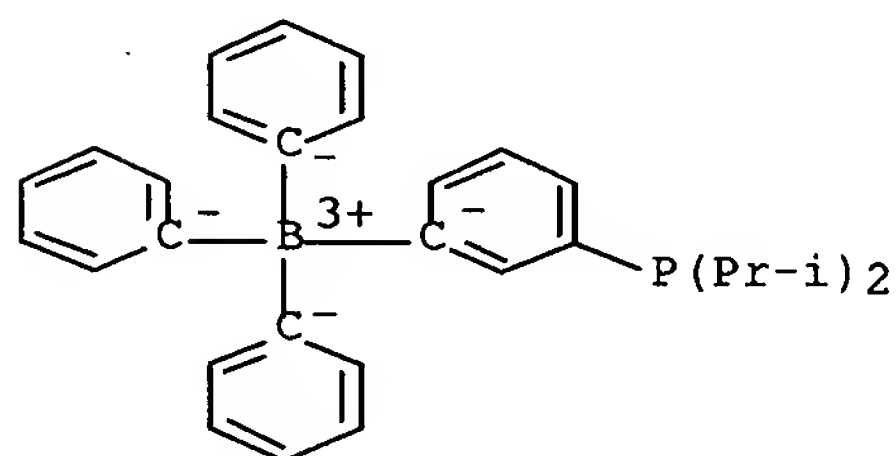
CN Ethanaminium, N,N,N-triethyl-, (T-4)-[3-[bis(1-
methylethyl)phosphino]phenyl]triphenylborate(1-) (9CI) (CA INDEX NAME)

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CRN 651329-76-9

CMF C30 H33 B P

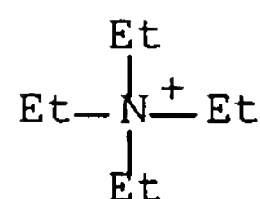
CCI CCS



CM 2

CRN 66-40-0

CMF C8 H20 N



IT 651329-79-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(preparation of (phosphino)tetraphenylborate coordinating anion ligands as
cocatalysts for transition metal catalyzed Suzuki cross-coupling
reaction of arylboronic acid with aryl halide)

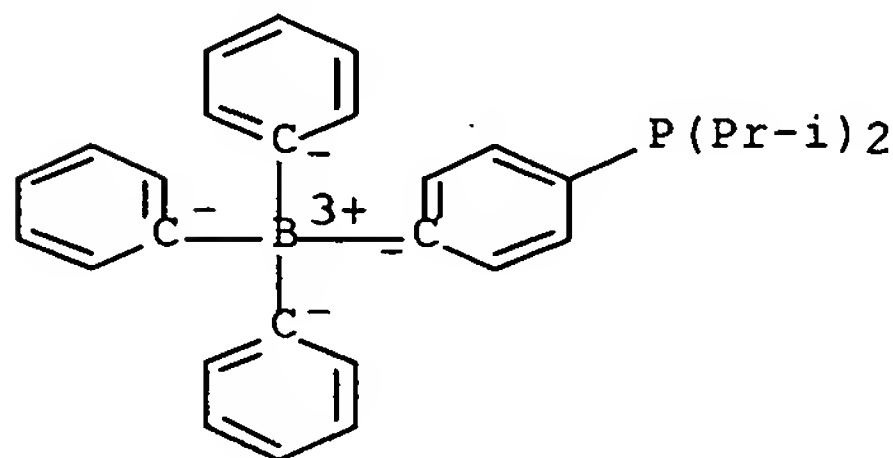
RN 651329-79-2 ZCAPLUS

10/580699

CN 1-Butanaminium, N,N,N-tributyl-, (T-4)-[4-[bis(1-methylethyl)phosphino]phenyl]triphenylborate(1-) (9CI) (CA INDEX NAME)

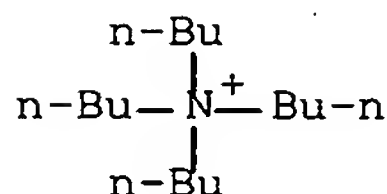
CM 1

CRN 651329-78-1
CMF C30 H33 B P
CCI CCS



CM 2

CRN 10549-76-5
CMF C16 H36 N



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L51 ANSWER 11 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:886259 ZCAPLUS Full-text
DOCUMENT NUMBER: 136:20365
TITLE: Preparation of transition metal complexes as catalyst for polymerization of olefins
INVENTOR(S): Johnson, Lynda K.; Bennett, Alison M. A.; Dobbs, Kerwin D.; Ionkin, Alex S.; Ittel, Steven D.; Wang, Ying; Radzewich, Catherine E.; Wang, Lin
PATENT ASSIGNEE(S): E. I. Du Pont de Nemours & Co., USA
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001092347	A2	20011206	WO 2001-US17628	20010531

WO 2001092347 A3 20030116
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
AU 200165260 A 20011211 AU 2001-65260 20010531
US 2002028897 A1 20020307 US 2001-870596 20010531
US 2002037982 A1 20020328 US 2001-870597 20010531
US 6541585 B2 20030401
EP 1292623 A2 20030319 EP 2001-939778 20010531
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
JP 2003535190 T 20031125 JP 2002-500958 20010531
CN 1626558 A 20050615 CN 2004-10090569 20010531
US 2003130449 A1 20030710 US 2002-272765 20021017
US 2003130453 A1 20030710 US 2002-273049 20021017
US 7115763 B2 20061003
US 2004158012 A1 20040812 US 2004-761030 20040120
US 7060768 B2 20060613
US 2005043496 A1 20050224 US 2004-943199 20040916
PRIORITY APPLN. INFO.: US 2000-208087P P 20000531
US 2000-211601P P 20000615
US 2000-214036P P 20000623
US 2001-264537P P 20010126
US 2001-294794P P 20010531
US 2001-871099 A3 20010531
US 2001-871100 A3 20010531
WO 2001-US17628 W 20010531
US 2002-57090 A3 20020125

OTHER SOURCE(S): MARPAT 136:20365

AB Polymers are produced using transition metal complexes that have sites capable of binding a Lewis acid in close proximity to the metal center. The patent also relates to a process for polymerizing an olefin component comprising one or more polymerizable olefins, comprising the step of contacting, under polymerizing conditions, said olefin component with a polymerization catalyst system, characterized in that the polymerization catalyst system comprises a group 3-11 transition metal or lanthanide, a coordinating ligand, and a Lewis acid component, wherein the Lewis acid component is : (a) neutral and covalently bound to said coordinating ligand, or (b) pos. charged and bound to a Lewis basic site of said coordinating ligand. The transition metal is Fe, CO, Pd, Ni or Cu.

IT **378793-55-6P**

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(preparation of transition metal complexes as catalyst for polymerization of olefins)

RN 378793-55-6 ZCAPLUS

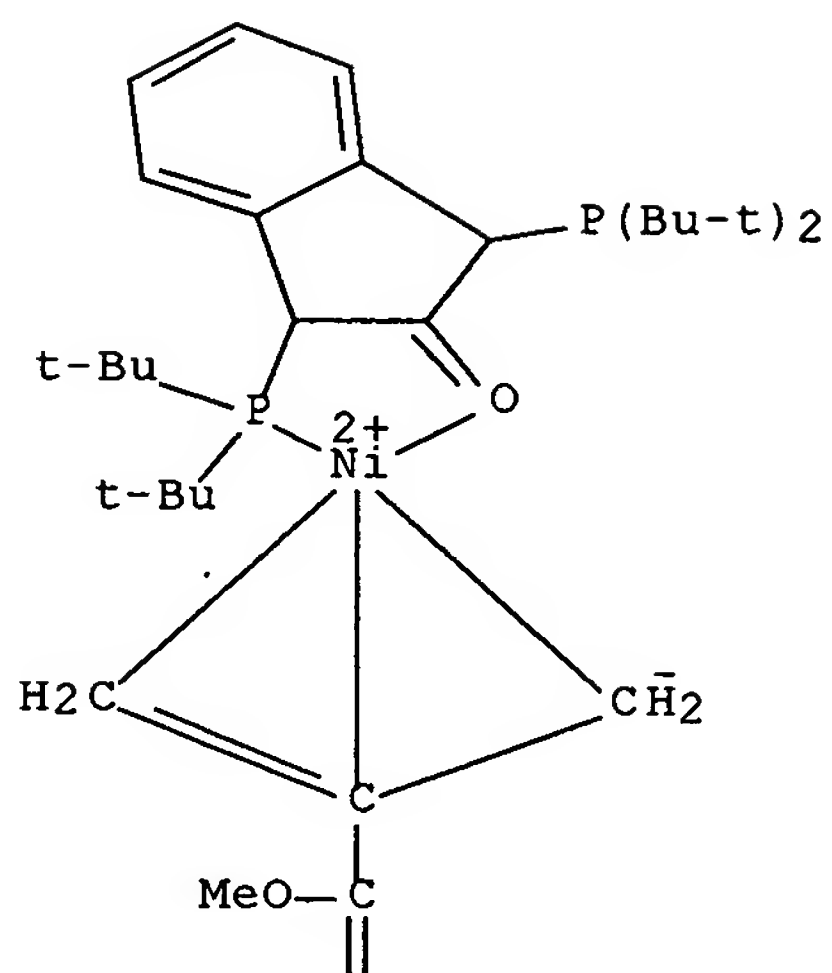
CN Nickel(1+), [1-[bis(1,1-dimethylethyl)phosphino-κP]-3-[bis(1,1-dimethylethyl)phosphino]-1,3-dihydro-2H-inden-2-one-κO] [(1,2,3-η)-2-(methoxycarbonyl)-2-propenyl]-, tetrakis(pentafluorophenyl)borate (1-) (9CI) (CA INDEX NAME)

CM 1

10/580699

CRN 378793-54-5
CMF C30 H49 Ni O3 P2
CCI CCS

PAGE 1-A

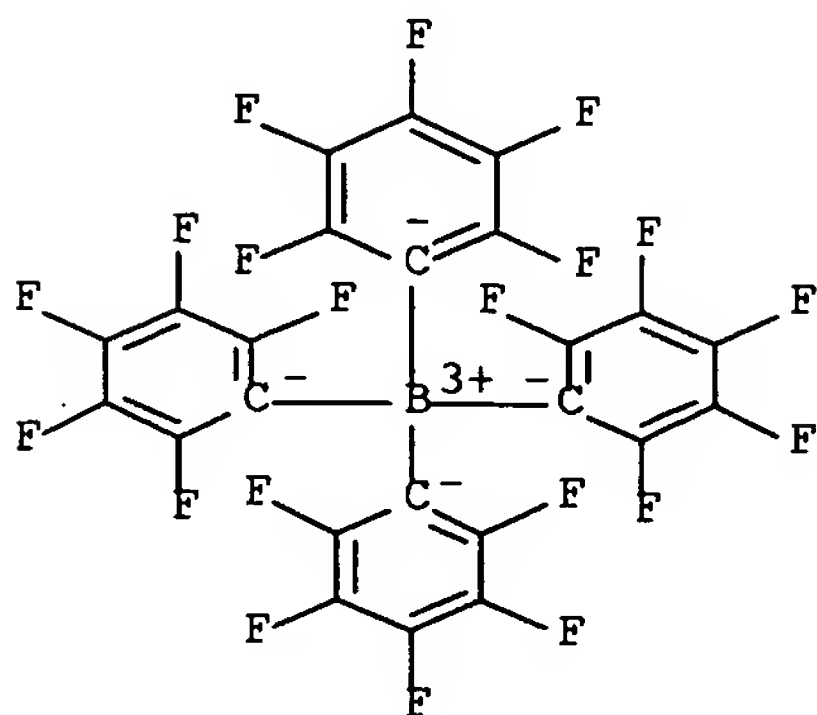


PAGE 2-A



CM 2

CRN 47855-94-7
CMF C24 B F20
CCI CCS



L51 ANSWER 12 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:583554 ZCAPLUS Full-text

DOCUMENT NUMBER: 115:183554

TITLE: Rhodium(I) and iridium(I) complexes with
1,2-bis(dicyclohexylphosphino)ethane ligands, and
their reactions with carbon monoxideAUTHOR(S): Del Zotto, Alessandro; Costella, Luigina; Mezzetti,
Antonio; Rigo, Pierluigi

CORPORATE SOURCE: Ist. Chim., Univ. Udine, Udine, 33100, Italy

SOURCE: Journal of Organometallic Chemistry (1991), 414(1),
109-18

CODEN: JORCAI; ISSN: 0022-328X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 1,2-Bis(dicyclohexylphosphino)ethane (dcpe) forms the mononuclear, square-planar rhodium(I) and iridium(I) complexes $[M(COD)(dcpe)]BPh_4$ (COD = 1,5-cyclooctadiene), $[M(dcpe)_2]BPh_4$, and $[MCl(CO)(dcpe)]$, which have been characterized by elemental analyses, IR, and 1H and $^{31}P\{^1H\}$ NMR spectroscopy. Their behavior toward carbon monoxide in dichloromethane solution at different temps. was examined, and the nature of the products formed established by IR and $^{31}P\{^1H\}$ NMR spectroscopy. Some of the products, including $[M(CO)_2(dcpe)]BPh_4$ and $[Ir(COD)(CO)(dcpe)]BPh_4$, were isolated in the solid state and fully characterized. The catalytic activity of the rhodium derivs. in the decarbonylation of benzaldehyde has been studied, and compared with that of the analogous complexes containing phenyl-substituted diphosphines.

IT **136638-35-2P**RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 136638-35-2 ZCAPLUS

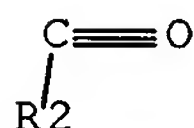
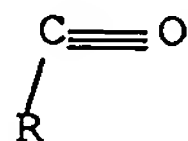
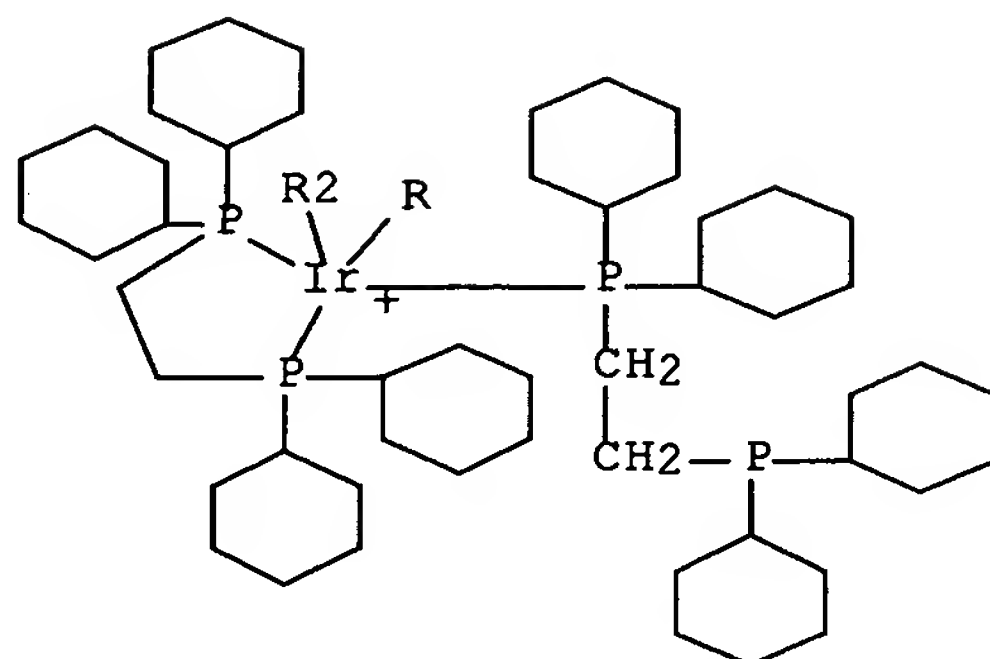
CN Iridium(1+), dicarbonyl[1,2-ethanediylbis[dicyclohexylphosphine]-P][1,2-ethanediylbis[dicyclohexylphosphine]-P,P']-, (TB-5-12)-, tetraphenylborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 136638-34-1

CMF C54 H96 Ir O2 P4

CCI CCS

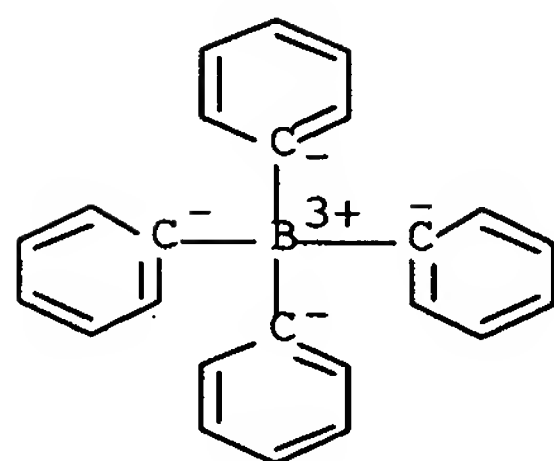


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



L51 ANSWER 13 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1982:162905 ZCAPLUS Full-text
 DOCUMENT NUMBER: 96:162905
 TITLE: Iron(II), cobalt(II) and nickel(II) complexes with the
 tripod ligand tris(2-dicyclohexylphosphinoethyl)amine
 AUTHOR(S): Stoppioni, P.; Morassi, R.; Zanobini, F.
 CORPORATE SOURCE: Ist. Chim. Gen. Inorg., Univ. Florence, Florence,

Italy

SOURCE:

Inorganica Chimica Acta (1981), 52(1), 101-6

CODEN: ICHAA3; ISSN: 0020-1693

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB The title tripod ligand (Cynp3), sterically hindered at the three P atoms, forms complexes $[MX(Cynp3)]Y$, ($M = Co, Ni, X = Cl, Br, I, NCS, Y = BPh_4$; $M = Fe, X = Cl, Br, I, Y = BPh_4$; $M = Co, X = Y = Cl, Br, I, NCS$; $M = Fe, X = Y = NCS$). The Fe complexes are five-coordinate with a trigonal bipyramidal structure. The Ni complexes are four-coordinate (donor set NP2X) with a square planar geometry and a non-bonded phosphine group. The Co complexes $[CoX(Cynp3)]BPh_4$ are high-spin five-coordinate with a distorted trigonal bipyramidal geometry both in the solid state and in solution. In the $[CoX(Cynp3)]X$ complexes the ligand is tetradentate in the solid state, whereas in solution tetrahedral species containing bidentate attachments (donor set P2X2) are also formed. Two isomeric bis-thiocyanate derivs. have been obtained, one blue and one brown. The former is high-spin with a pseudotetrahedral geometry, whereas the latter is low-spin with a trigonal bipyramidal geometry and donor set NP2(NCS)2. In solution, both complexes give the same trigonal bipyramidal species.

IT 81433-15-0P 81433-17-2P 81433-19-4P

81433-21-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and spectral characteristics of)

RN 81433-15-0 ZCAPLUS

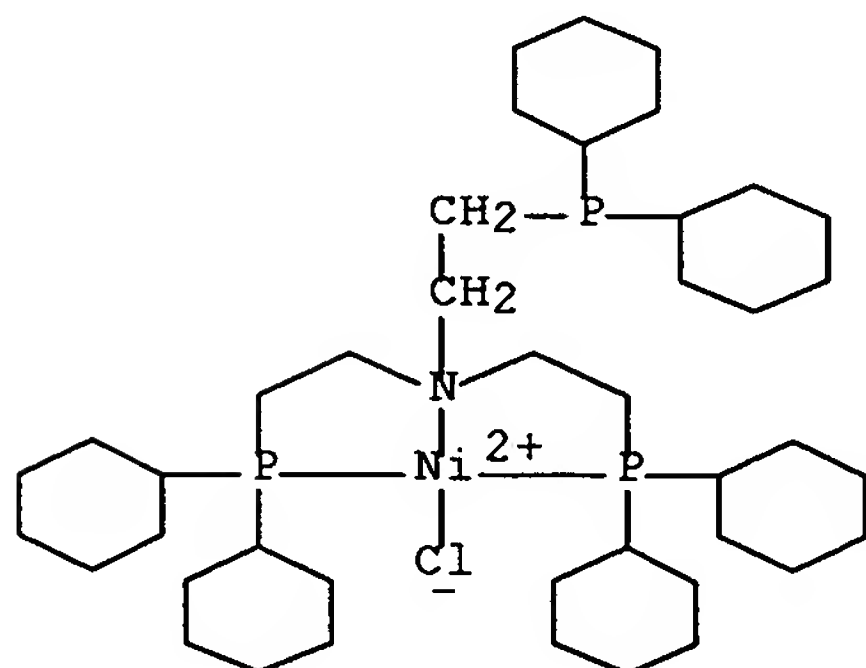
CN Nickel(1+), chloro[2-(dicyclohexylphosphino)-N,N-bis[2-(dicyclohexylphosphino)ethyl]ethanamine-N,P,P']-, (SP-4-3)-, tetraphenylborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 81433-14-9

CMF C42 H78 Cl N Ni P3

CCI CCS.

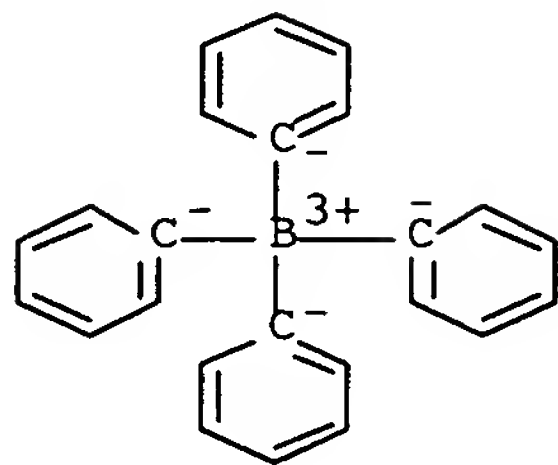


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



RN 81433-17-2 ZCAPLUS

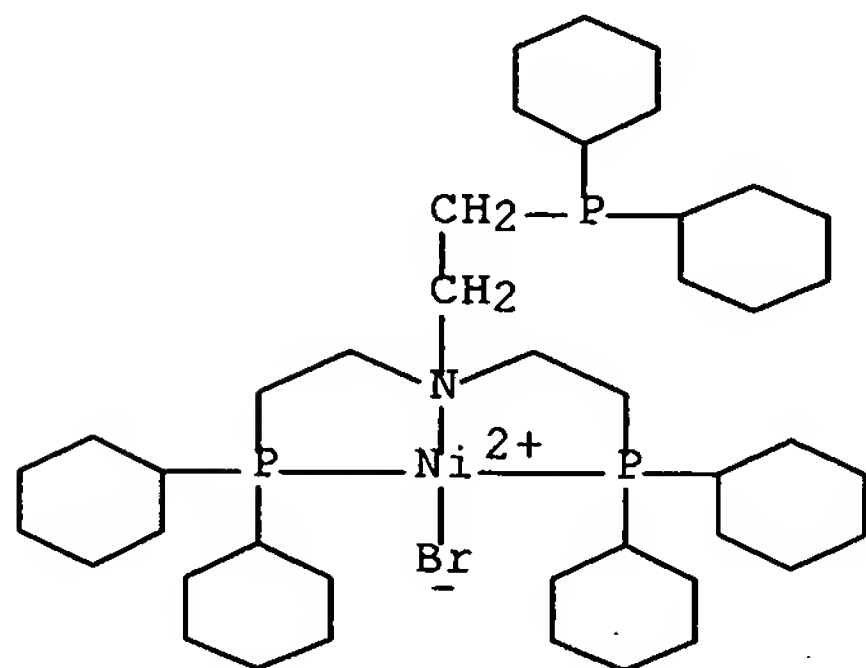
CN Nickel(1+), bromo[2-(dicyclohexylphosphino)-N,N-bis[2-(dicyclohexylphosphino)ethyl]ethanamine-N,P,P']-, (SP-4-3)-, tetraphenylborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 81433-16-1

CMF C42 H78 Br N Ni P3

CCI CCS

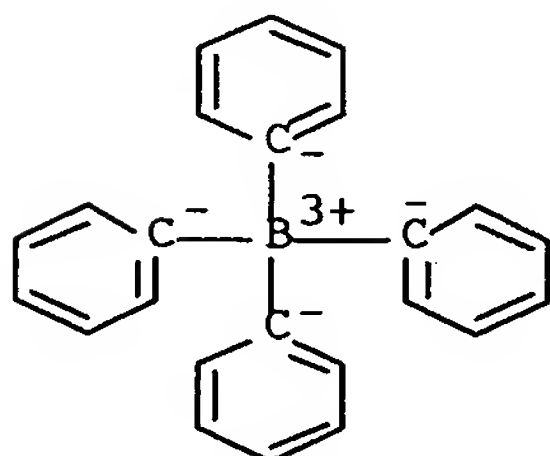


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



RN 81433-19-4 ZCAPLUS

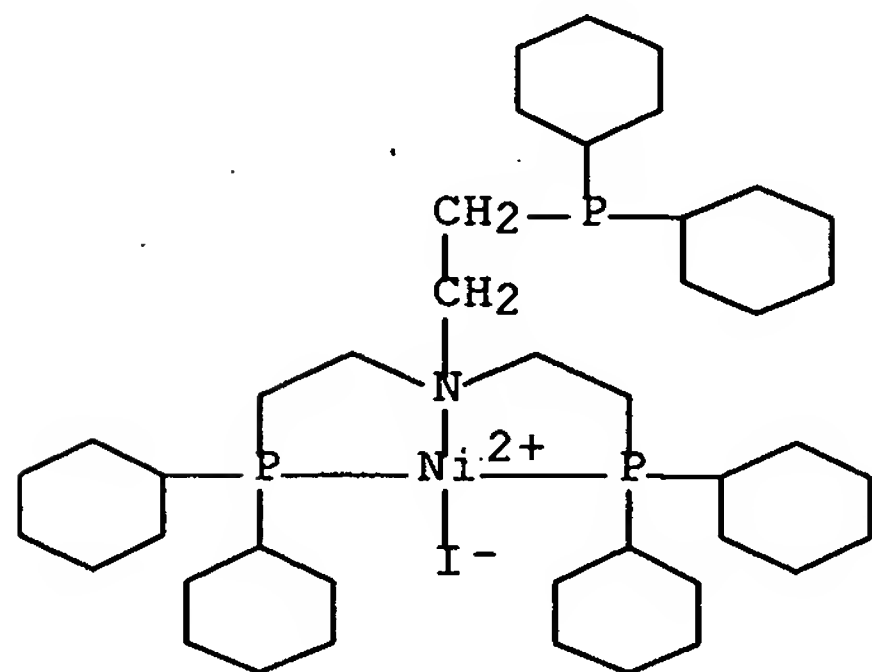
CN Nickel(1+), [2-(dicyclohexylphosphino)-N,N-bis[2-(dicyclohexylphosphino)ethyl]ethanamine-N,P,P']iodo-, (SP-4-3)-, tetraphenylborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 81433-18-3

CMF C42 H78 I N Ni P3

CCI CCS

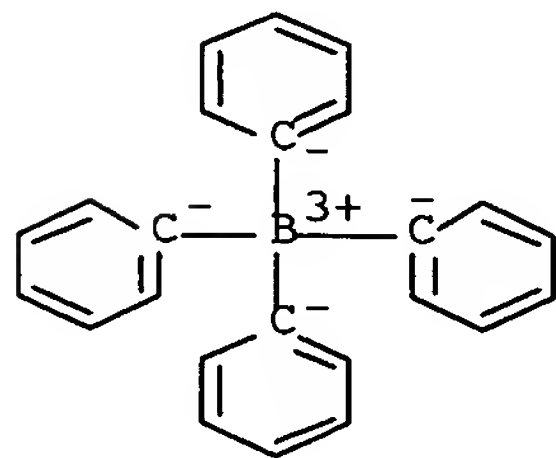


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



RN 81433-21-8 ZCAPLUS

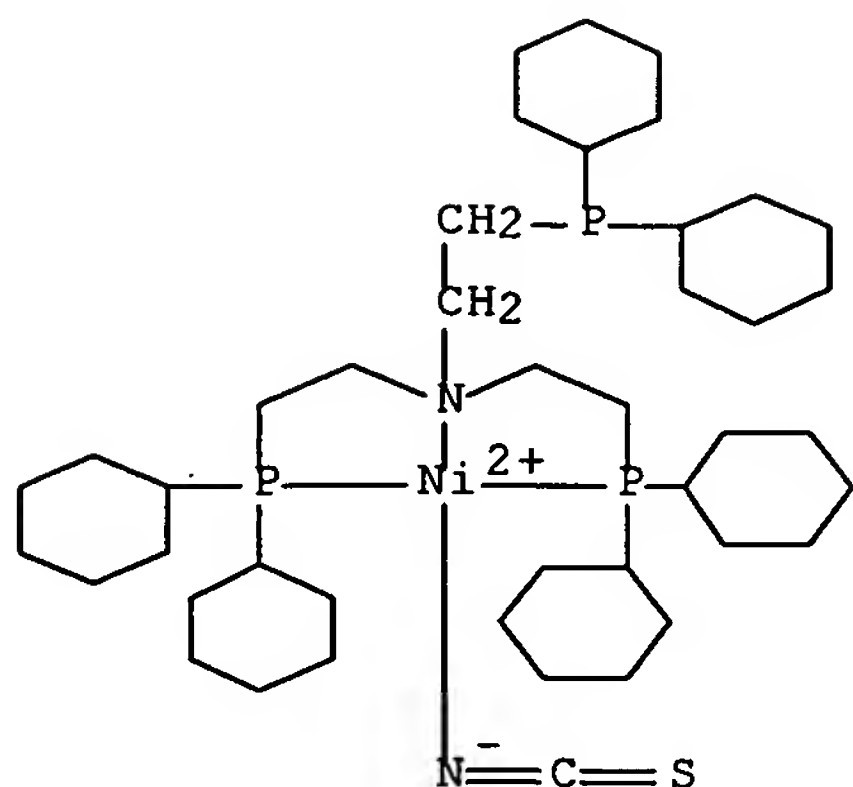
CN Nickel(1+), [2-(dicyclohexylphosphino)-N,N-bis[2-(dicyclohexylphosphino)ethyl]ethanamine-N,P,P'](thiocyanato-N)-, (SP-4-1)-, tetraphenylborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 81433-20-7

CMF C43 H78 N2 Ni P3 S

CCI CCS

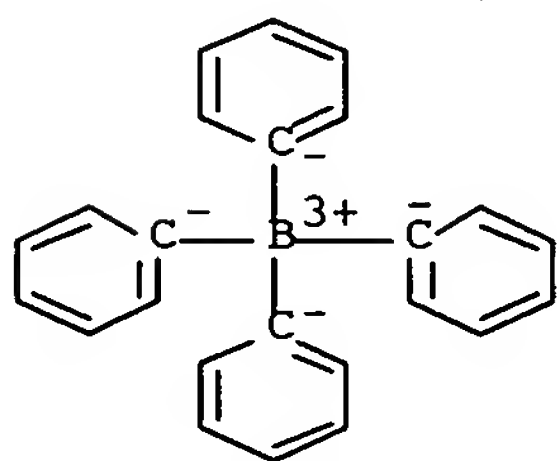


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



L51 ANSWER 14 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1973:72347 ZCAPLUS Full-text

DOCUMENT NUMBER: 78:72347

ORIGINAL REFERENCE NO.: 78:11509a,11512a

TITLE: Transition metal-carbon bonds. XXXIII. Internal metalations of secondary and tertiary carbon atoms by platinum(II) and palladium(II)

AUTHOR(S): Gill, D. F.; Mann, B. E.; Shaw, B. L.

CORPORATE SOURCE: Sch. Chem., Univ. Leeds, Leeds, UK

SOURCE: Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999) (1973), (3), 270-8
CODEN: JCDTBI; ISSN: 0300-9246

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Treating $[\text{PtCl}_2(\text{PhCN})_2]$ with di-tert-butyl(o-ethylphenyl)phosphine (HL) or di-tert-butyl(o-isopropylphenyl)phosphines (HL1) gave the internally metalated complexes $[\text{Pt}_2\text{Cl}_2(\text{P-C})_2]$ ($\text{P-C} = \text{CHMeC}_6\text{H}_4\text{P}(\text{CMe}_3)_2$ or $\text{P1-C} = \text{CMe}_2\text{C}_6\text{H}_4\text{P}(\text{CMe}_3)_2$, resp.). Treating Na_2PdCl_4 with HL gave trans- $[\text{PdCl}_2\text{L}_2]$ which on heating gave $\text{PdCl}_2(\text{P-C})_2$. In all cases the metalation occurred at the α -C of the ligand.

[M₂Cl₂(P-C)₂] (M = Pt, Pd) undergo bridge-splitting reactions with various ligands Q (e.g. py, PPh₃, PMe₂Ph) to give mononuclear species [MClQ(P-C)]. Treatment of Na₂PdCl₄ with HL1 gave [Pd₂Cl₄L₂] which did not internally metalate. ¹H, ¹³C, and ³¹P NMR spectra were measured and discussed.

IT 40988-98-5P 41574-12-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and complexation with palladium and platinum salts)

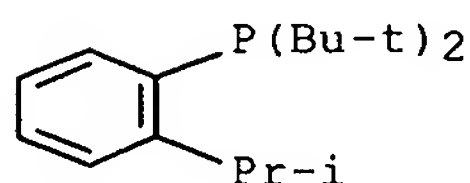
RN 40988-98-5 ZCAPLUS

CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)[2-(1-methylethyl)phenyl]phosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 35823-26-8

CMF C17 H29 P

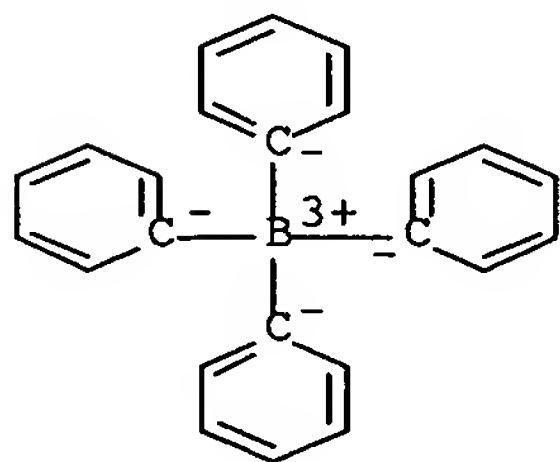


CM 2

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



● H⁺

RN 41574-12-3 ZCAPLUS

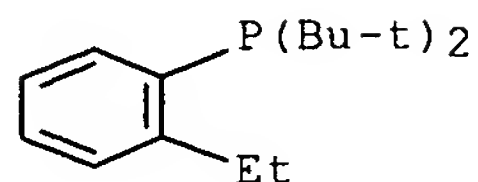
CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)(2-ethylphenyl)phosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 35823-27-9

CMF C16 H27 P

10/580699

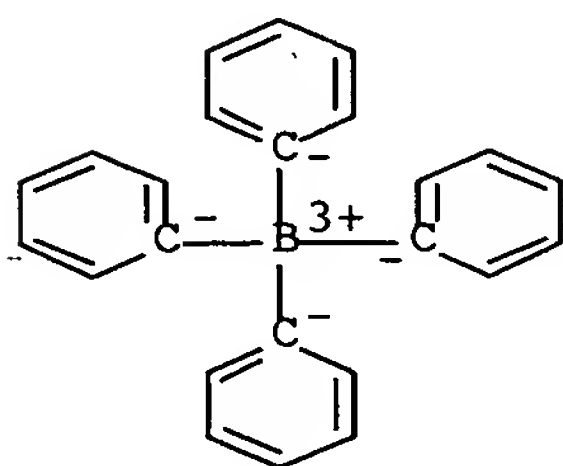


CM 2

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



● H⁺

IT **40988-98-5P 41574-12-3P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

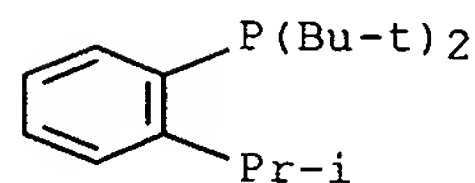
RN 40988-98-5 ZCAPLUS

CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)[2-(1-methylethyl)phenyl]phosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 35823-26-8

CMF C17 H29 P

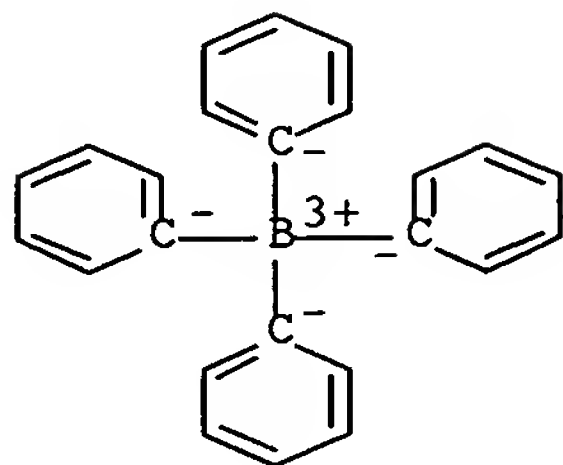


CM 2

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



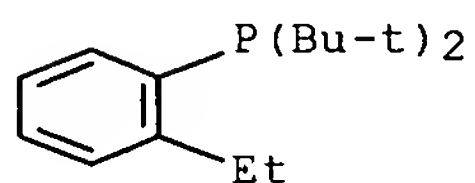
RN 41574-12-3 ZCAPLUS

CN Borate(1-), tetraphenyl-, hydrogen, compd. with bis(1,1-dimethylethyl)(2-ethylphenyl)phosphine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 35823-27-9

CMF C16 H27 P

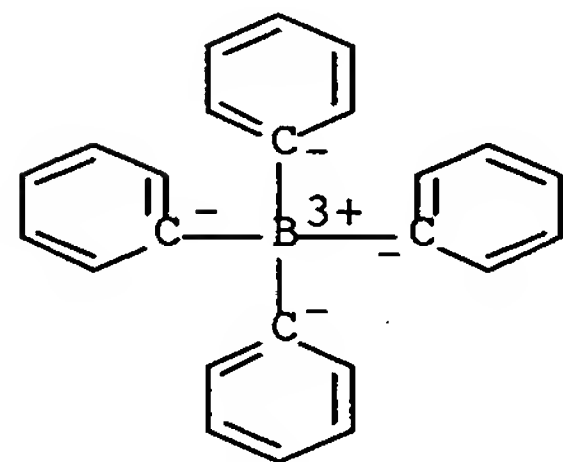


CM 2

CRN 33906-65-9

CMF C24 H20 B . H

CCI CCS



L51 ANSWER 15 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1968:418348 ZCAPLUS Full-text

10/580699

DOCUMENT NUMBER: 69:18348
ORIGINAL REFERENCE NO.: 69:3423a,3426a
TITLE: Chemistry of alkylenephosphines. IV. Kinetic studies of triphenylalkylenephosphine hydrolysis
AUTHOR(S): Issleib, Kurt; Lindner, Rolf
CORPORATE SOURCE: Univ. Halle/Saale, Halle/Saale, Fed. Rep. Ger.
SOURCE: Justus Liebigs Annalen der Chemie (1968), 713, 12-29
CODEN: JLACBF; ISSN: 0075-4617
DOCUMENT TYPE: Journal
LANGUAGE: German

AB In aqueous solution $\text{Ph}_3\text{P}:\text{CHPh}_3\text{Br}$ forms Ph_3PO , C_6H_6 and Ph_2MePO via Ph_3PMeBr . The kinetics of the hydrolysis are studied by uv spectrophotometric measurement of the ylene concentration relative to temperature and pH. At constant pH the reaction rate of the alkylene phosphine cleavage is of first order. Assuming that $[\text{H}_3\text{O}^+] \ll K_{\text{a1}}$, pH-dependent hydrolysis was not detected. When $\text{pH} \ll \text{p}K_{\text{a1}}$ the decomposition rate of the ylene is decreased by an acid-base equilibrium. The temperature-dependence of the rate consts. led to the activation enthalpy $\Delta H^{++} = 7.4 \text{ kcal./mole}$ and activation entropy $\Delta S^{++} = -61 \text{ cal. mole}^{-1}$. The reaction mechanism of the hydrolysis is discussed. The hydrolysis of $\text{Ph}_3\text{P}:\text{CRPR}_2\text{Hal}$ (I) and $\text{Ph}_3\text{P}:\text{CHCOR}$ was also studied. The preparation of I from $\text{Ph}_3\text{P}:\text{CRPR}_2$ and alkyl halides is described. 45 references.

IT 15389-64-7P 20346-90-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

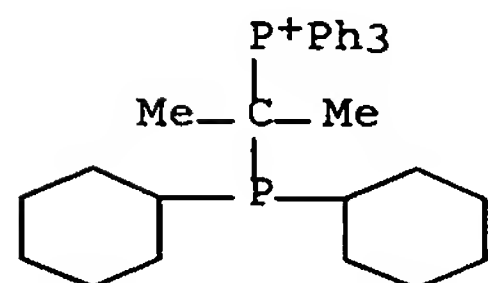
RN 15389-64-7 ZCAPLUS

CN Phosphonium, [1-(dicyclohexylphosphino)-1-methylethyl]triphenyl-, tetraphenylborate(1-) (8CI) (CA INDEX NAME)

CM 1

CRN 47757-17-5

CMF C33 H43 P2

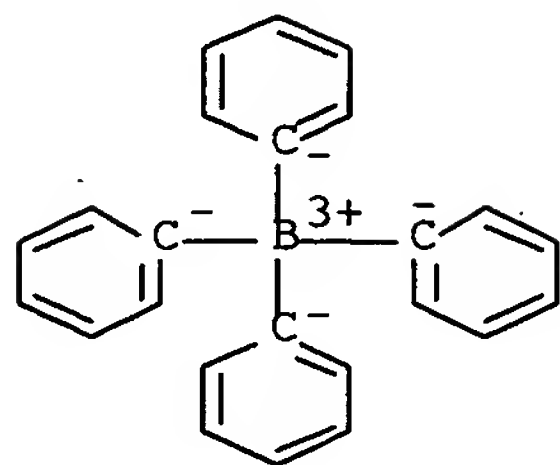


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



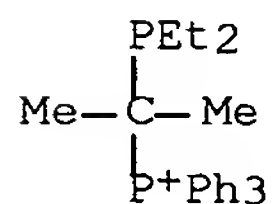
RN 20346-90-1 ZCAPLUS

CN Phosponium, [1-(diethylphosphino)-1-methylethyl]triphenyl-,
tetrphenylborate(1-) (8CI) (CA INDEX NAME)

CM 1

CRN 47519-93-7

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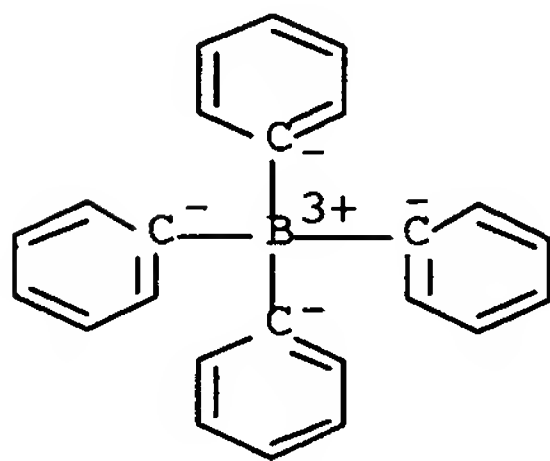


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



L51 ANSWER 16 OF 24 ZCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1967:46454 ZCAPLUS Full-text

DOCUMENT NUMBER: 66:46454

ORIGINAL REFERENCE NO.: 66:8823a,8826a

TITLE: Chemistry of phosphine alkylenes. I. Reaction of
phosphine alkylenes with dialkyl and diaryl
chlorophosphines

AUTHOR(S): Issleib, Kurt; Lindner, Rolf

10/580699

CORPORATE SOURCE: Univ. Halle, Halle, Germany
SOURCE: Ann. Chem., Justus Liebig's (1966), 699, 40-52
CODEN: ACJLAQ
DOCUMENT TYPE: Journal
LANGUAGE: German

AB Substituted triphenyl- and tricyclohexylphosphine alkylenes [RR1C:PPh3 (I) and RR1C:P(C6H11)3] react with R22PCl [R2 = Ph and R2 = C6H11] with nucleophilic substitution to give (R22PCRRP+PH3)X-, R22PCR:PPh3, and R22PCR:P(C6H11)3 (II) where C6H11 is cyclohexyl. II were characterized by reaction with H2O and alkyl halides and give with BzH (a Wittig reaction), the tertiary phosphines PhCH:CMOR22. Ph3P was isolated as a by-product of these reactions in varying amts. depending on the substituents. The mechanism of the reaction was discussed. Solns. of appropriate I were prepared from the corresponding phosphonium salts by the NaNH2 method (Bestmann, CA 56, 12925b).

IT 15389-63-6P 15389-64-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

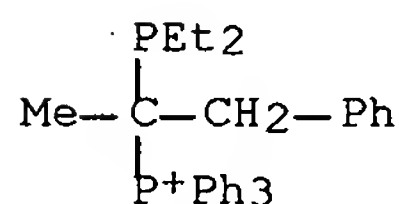
RN 15389-63-6 ZCAPLUS

CN Phosphonium, [α -(diethylphosphino)- α -methylphenethyl]triphenyl-, tetraphenylborate(1-) (8CI) (CA INDEX NAME)

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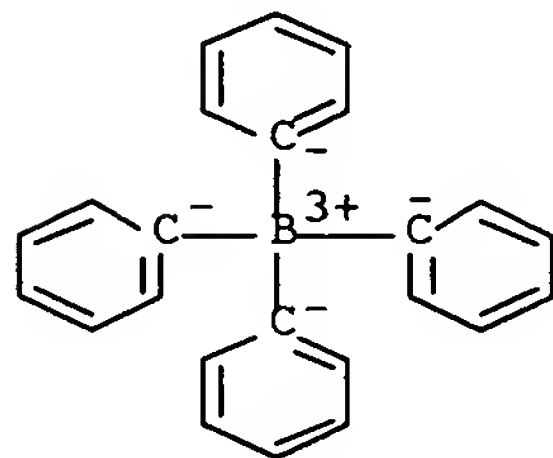


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



RN 15389-64-7 ZCAPLUS

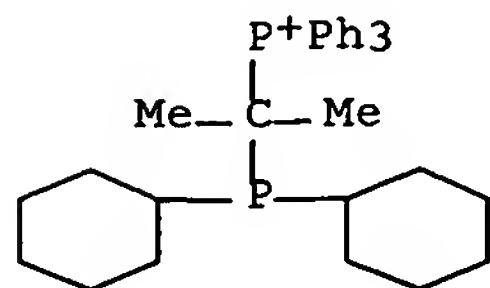
CN Phosphonium, [1-(dicyclohexylphosphino)-1-methylethyl]triphenyl-, tetraphenylborate(1-) (8CI) (CA INDEX NAME)

10/580699

CM 1

CRN 47757-17-5

CMF C33 H43 P2

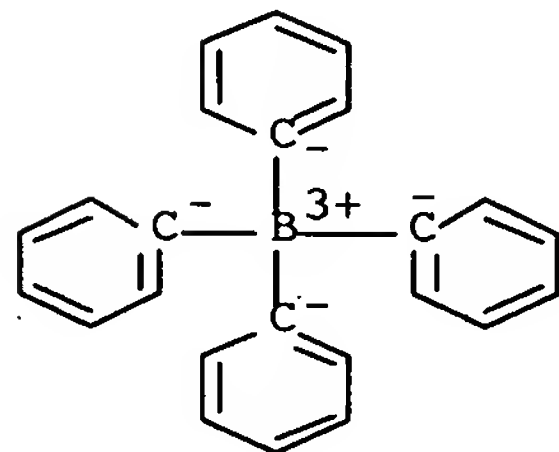


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



L51 ANSWER 17 OF 24 BABS COPYRIGHT 2007 BEILSTEIN MDL on STN DUPLICATE 3
ACCESSION NUMBER: **6281441** BABS Full-text

TITLE: An Acidity Scale for Phosphorus-Containing Compounds Including Metal Hydrides and Dihydrogen Complexes in THF: Toward the Unification of Acidity Scales
AUTHOR(S): Abdur-Rashid, Kamaluddin; Fong, Tina P.; Greaves, Bronwyn; Gusev, Dmitry G.; Hinman, Justin G.; Landau, Shaun E.; Lough, Alan J.; Morris, Robert H.
SOURCE: J.Amer.Chem.Soc. (2000), 122(38), 9155 - 9171

CODEN: JACSAT

DOCUMENT TYPE: Journal

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT: More than 70 equilibrium constants K between acids and bases, mainly phosphine derivatives, have been measured in tetrahydrofuran (THF) at 20 deg C by ¹H and/or ³¹P NMR. The acids were chosen or newly

wide pK_a range of 5-41 versus the anchor
 compound [HPCy3]BPh₄ at 9.7. These pK_a values are
 approximations to absolute, free ion pK_a and
 are obtained by crudely correcting the observed K
 for 1:1 ion-pairing effects by use of the Fuoss
 equation. The acid/base compounds include 14
 phosphonium/phosphine couples, 17
 couples, 9 neutral cationic hydride/neutral hydride
 14 polyhydride/anionic hydride couples,
 other nitrogen- and dihydrogen/hydride couples, and 4
 on pK_a of the phosphorus-based acids. The effects
 crown-6)]⁺ are counterions BAr⁴⁻ and BF₄⁻ and
 for differences in [K(2,2,2-crypt)]⁺ versus [K(18-
 involved. found to be minor after correcting
 for the first inter-ion distances in the ion-pairs
 M-H bonding in Correlations with $\Delta n(M-H)$ noted here
 important contributor time suggest that destabilization of
 Re-H bonding in the conjugate base hydride is an
 greatly weakened by to hydride acidity. It appears that
 PR₃, resulting in a the anions [ReH₆(PR₃)₂]⁻ is
 conjugate acid small increases in the basicity of
 scales allow an large increase in the pK_a of the
 of more than 1000 ReH₇(PR₃)₂. Correlations with other
 carbonyl hydride estimate of the pK_a values
 complexes, and inorganic and organic acids, 20
 acid-base complexes, 46 cationic hydrides
 reactions dihydrogen gas. Therefore, many new
 dielectric constant, reactions can be predicted and known
 acids HA over explained. THF, with its low
 disfavors the ionization of neutral

are found for HB⁺, and therefore separate lines
 pK_a(THF) and
 pK_a(HB⁺) when plotted
 against pK_a(DMSO) or pK_a(MeCN).
 The crystal
 structure of [Re(H)₂(PMe₃)₅]BPh₄ is
 reported.

L51 ANSWER 18 OF 24 BEILSTEIN COPYRIGHT 2007 BEILSTEIN MDL on STN

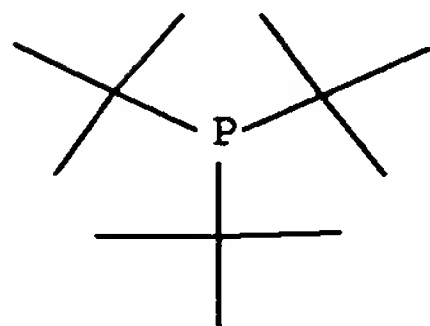
Beilstein Records (BRN):	8819356
Lin. Struct. Formula (LSF):	C ₂₄ H ₂₀ B(1-)*C ₁₂ H ₂₇ P*H(1+)
Fragm. Molec. Formula (FMF):	C ₂₄ H ₂₀ B , C ₁₂ H ₂₇ P , H
Molecular Formula (MF):	C ₂₄ H ₂₀ B . C ₁₂ H ₂₇ P . H
Molecular Weight (MW):	319.23, 202.32, 1.01
Fragment BRN (FBRN):	1654829, 1738613, 3902898
Lawson Number (LN):	16763, 3758
Compound Type (CTYPE):	isocyclic
Constitution ID (CONSID):	7465252
Tautomer ID (TAUTID):	8287899
Entry Date (DED):	2001/07/25
Update Date (DUPD):	2007/02/05

CM 1

FBRN 3902898
 FMF H

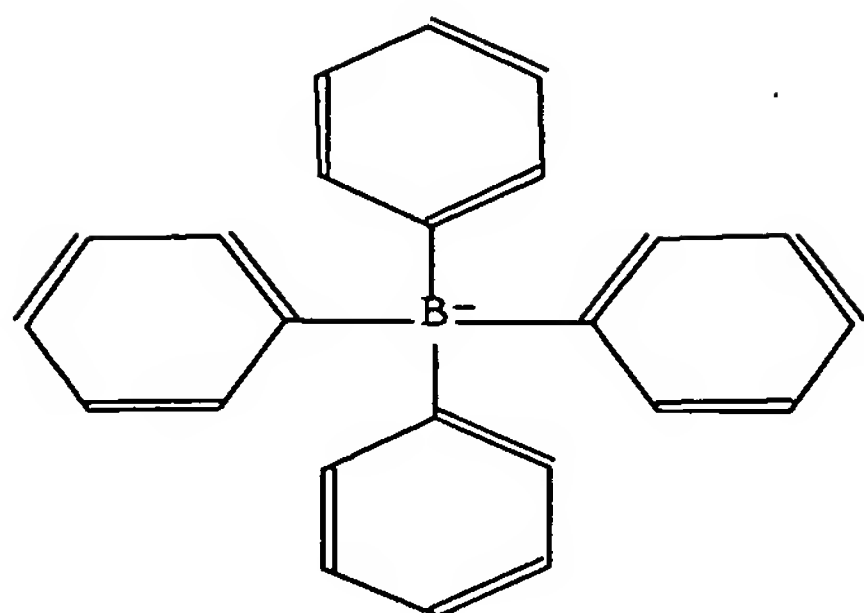
CM 2

FBRN 1738613
 FMF C₁₂ H₂₇ P



CM 3

FBRN 1654829
 FMF C24 H20 B



Field Availability:

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BRN	Beilstein Records	1
LSF	Linearized Structure Formula	1
FMF	Fragment Molecular Formula	3
MF	Molecular Formula	1
FW	Formular Weight	3
FBRN	Fragment BRN	3
LN	Lawson Number	2
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
DED	Entry Date	1
DUPD	Update Date	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	2
RXREA	Substance is Reaction Reactant	1
RXPRO	Substance is Reaction Product	1

All References:

ALLREF

1. Abdur-Rashid, Kamaluddin; Fong, Tina P.; Greaves, Bronwyn; Gusev, Dmitry G.; Hinman, Justin G.; Landau, Shaun E.; Lough, Alan J.; Morris, Robert H., J. Am. Chem. Soc., CODEN: JACSAT, SIN122(38), <2000>, 9155 - 9171; BABS-6594776
2. Abdur-Rashid, Kamaluddin; Fong, Tina P.; Greaves, Bronwyn; Gusev, Dmitry G.; Hinman, Justin G.; Landau, Shaun E.; Lough, Alan J.; Morris, Robert H., J. Amer. Chem. Soc., CODEN: JACSAT, 122(38), <2000>, 9155 - 9171; BABS-6281441

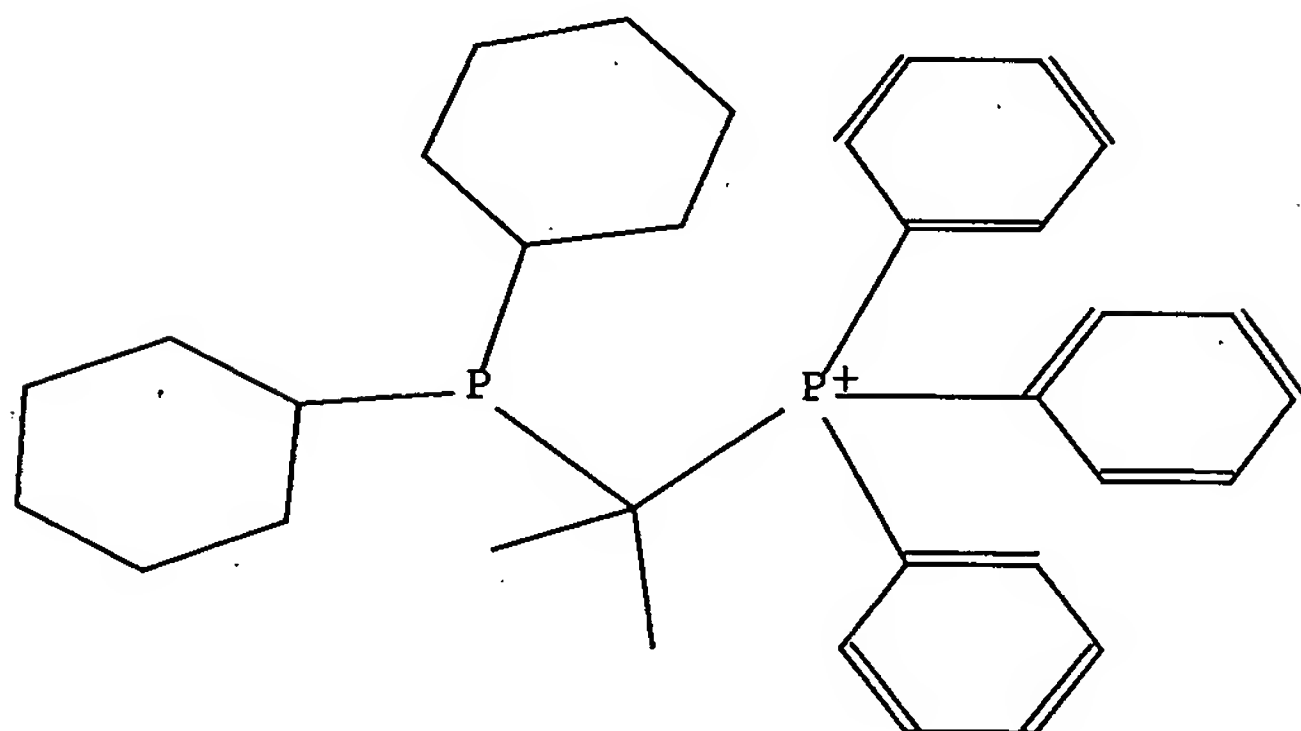
10/580699

Beilstein Records (BRN):	6710863
Lin. Struct. Formula (LSF):	C33H43P2(1+)*C24H20B(1-)
Fragm. Molec. Formula (FMF):	C33 H43 P2 , C24 H20 B
Molecular Formula (MF):	C33 H43 P2 . C24 H20 B
Molecular Weight (MW):	501.65, 319.23
Fragment BRN (FBRN):	4163294, 3910925
Lawson Number (LN):	16763, 16731, 16723, 709
Compound Type (CTYPE):	isocyclic
Beilstein Citation (BSO):	5-16
Entry Date (DED):	1994/07/15
Update Date (DUPD):	1994/07/22
Compound Disposition (CDISP):	4115452 Alternate BRN

CM 1

FBRN 4163294

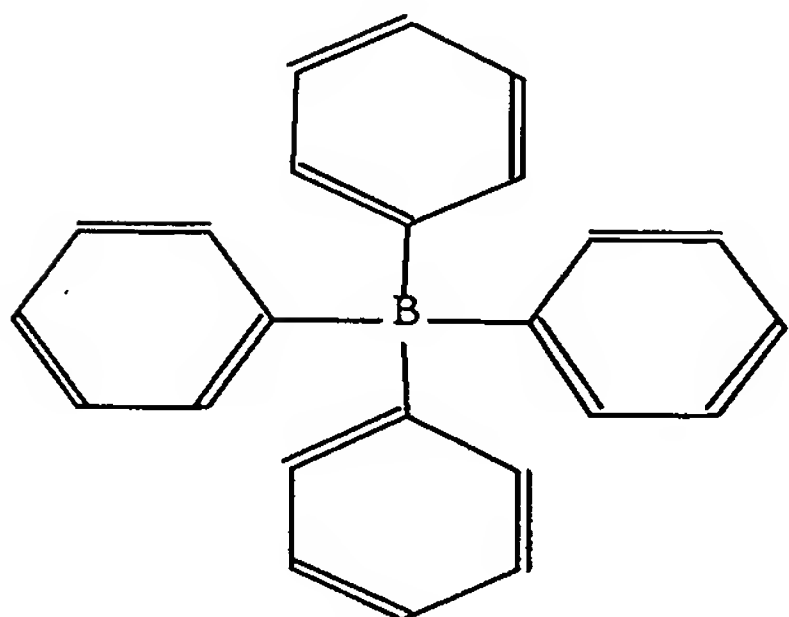
FMF C33 H43 P2



CM 2

FBRN 3910925

FMF C24 H20 B



Fragment Notes:

Unknown location for Localized Charge of (-1)

Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
LSF	Linearized Structure Formula	1
FMF	Fragment Molecular Formula	2
MF	Molecular Formula	1
FW	Formular Weight	2
FBRN	Fragment BRN	2
LN	Lawson Number	4
FS	File Segment	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
DED	Entry Date	1
DUPD	Update Date	1
CDISP	Compound Disposition	1
MP	Melting Point	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

All References:

ALLREF

1. Issleib, K.; Lindner, R., Justus Liebigs Ann. Chem., CODEN: JLACBF, 699, <1966>, 40-52

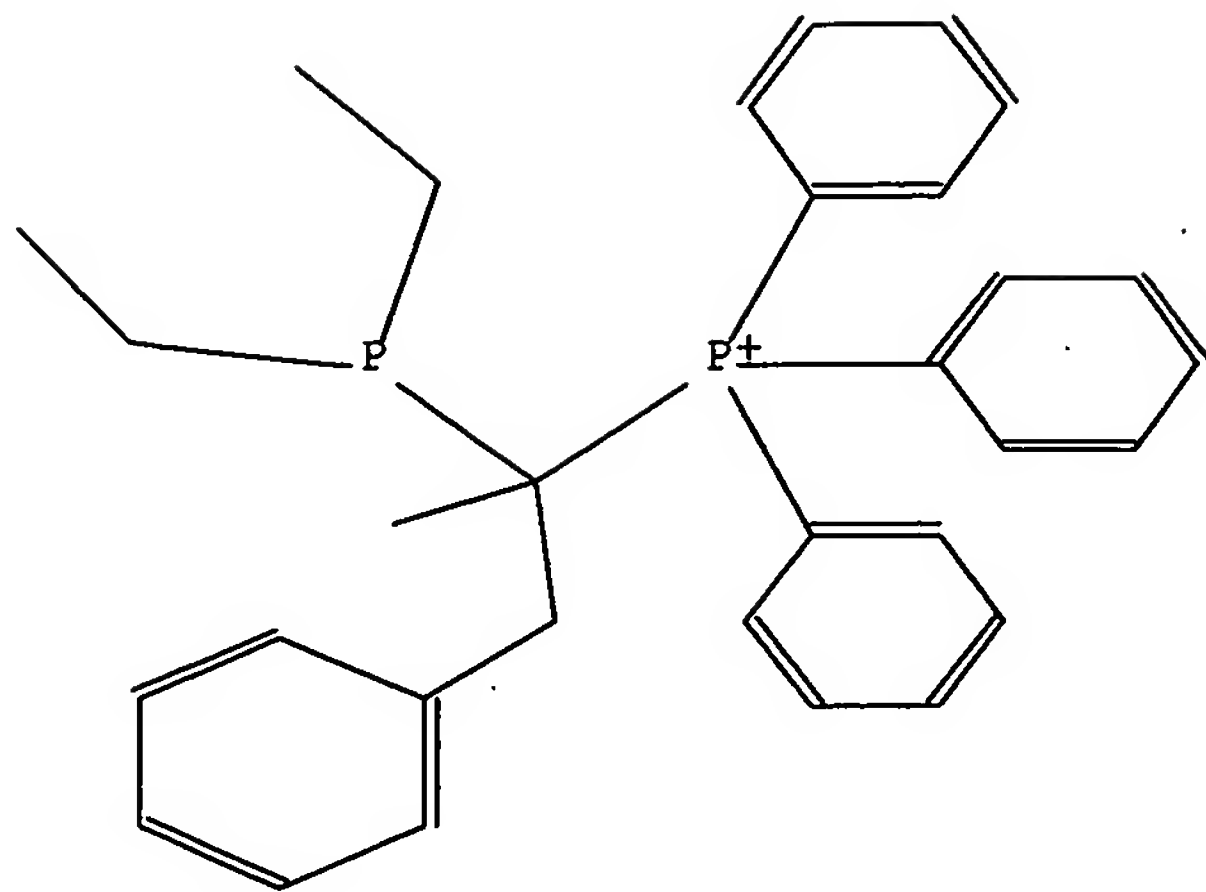
L51 ANSWER 20 OF 24 BEILSTEIN COPYRIGHT 2007 BEILSTEIN MDL on STN

Beilstein Records (BRN): 6710850
 Lin. Struct. Formula (LSF): C31H35P2(1+)*C24H20B(1-)
 Fragm. Molec. Formula (FMF): C31 H35 P2 , C24 H20 B
 Molecular Formula (MF): C31 H35 P2 . C24 H20 B
 Molecular Weight (MW): 469.57, 319.23
 Fragment BRN (FBRN): 4160575, 3910925
 Lawson Number (LN): 16763, 16731, 7144, 3746
 Compound Type (CTYPE): isocyclic
 Beilstein Citation (BSO): 5-16
 Entry Date (DED): 1994/07/15
 Update Date (DUPD): 1994/07/22
 Compound Disposition (CDISP): 4115096 Alternate BRN

CM 1

FBRN 4160575

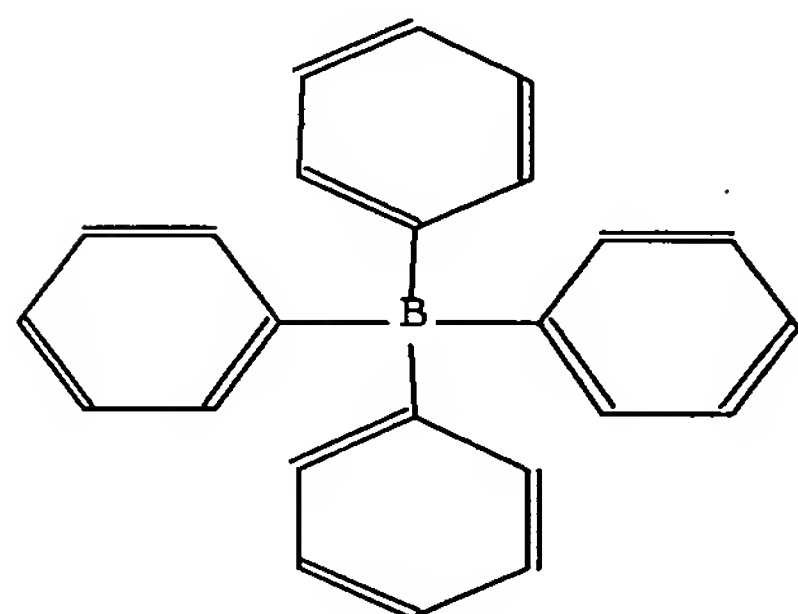
FMF C31 H35 P2



CM 2

FBRN 3910925

FMF C24 H20 B



Fragment Notes:

Unknown location for Localized Charge of (-1)

Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
LSF	Linearized Structure Formula	1
FMF	Fragment Molecular Formula	2
MF	Molecular Formula	1
FW	Formular Weight	2
FBRN	Fragment BRN	2
LN	Lawson Number	4
FS	File Segment	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1

10/580699

DED	Entry Date	1
DUPD	Update Date	1
CDISP	Compound Disposition	1
MP	Melting Point	1

All References:

ALLREF

1. Issleib, K.; Lindner, R., Justus Liebigs Ann. Chem., CODEN: JLACBF, 699, <1966>, 40-52

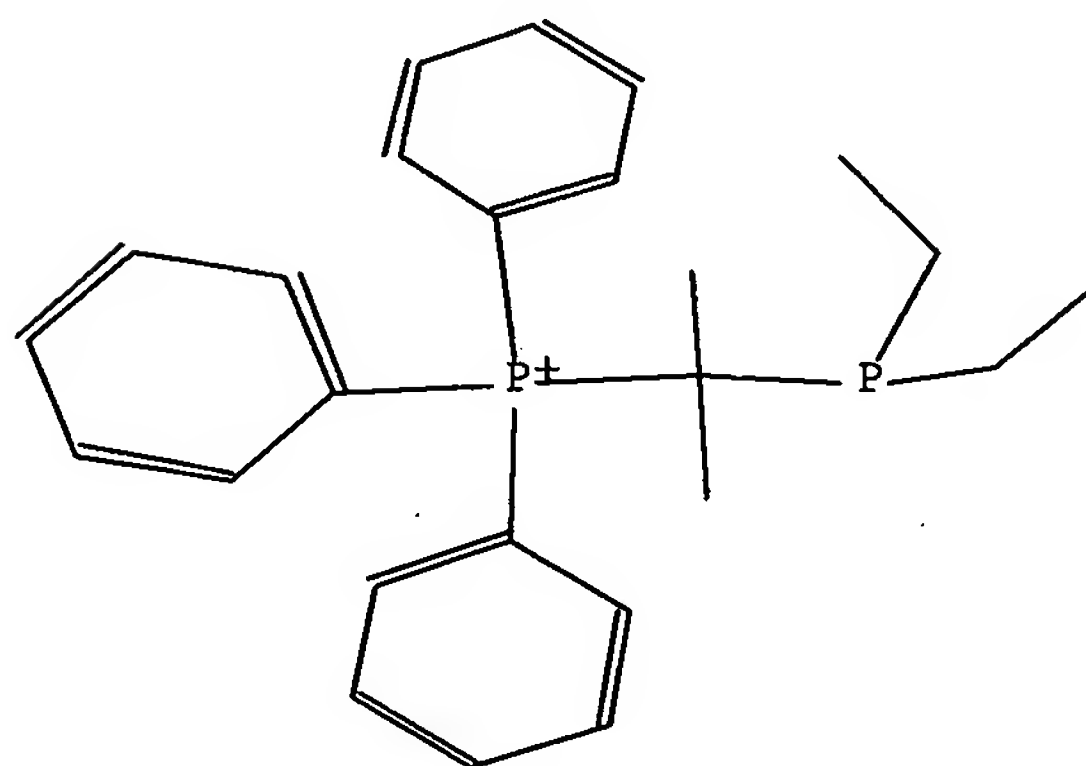
L51 ANSWER 21 OF 24 BEILSTEIN COPYRIGHT 2007 BEILSTEIN MDL on STN

Beilstein Records (BRN):	6710813
Lin. Struct. Formula (LSF):	C25H31P2(1+)*C24H20B(1-)
Fragm. Molec. Formula (FMF):	C25 H31 P2 , C24 H20 B
Molecular Formula (MF):	C25 H31 P2 . C24 H20 B
Molecular Weight (MW):	393.47, 319.23
Fragment BRN (FBRN):	6703356, 1654829
Lawson Number (LN):	16763, 16731, 3746, 709
Compound Type (CTYPE):	isocyclic
Constitution ID (CONSID):	5866315
Tautomer ID (TAUTID):	6431776
Beilstein Citation (BSO):	5-16
Entry Date (DED):	1994/07/15
Update Date (DUPD):	1994/07/19

CM 1

FBRN 6703356

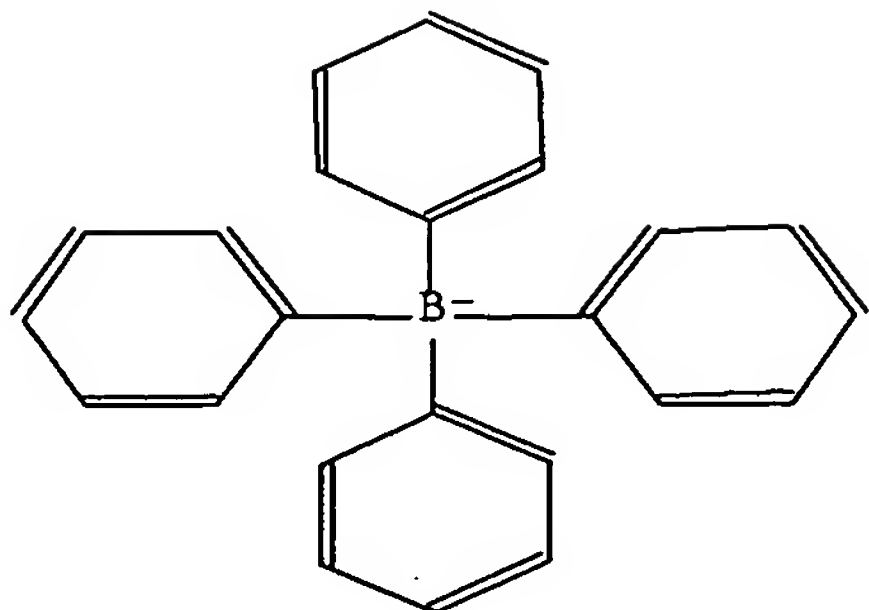
FMF C25 H31 P2



CM 2

FBRN 1654829

FMF C24 H20 B



Field Availability:

Code	Name	Occurrence
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FMF	Fragment Molecular Formula	2
MF	Molecular Formula	1
FW	Formular Weight	2
FBRN	Fragment BRN	2
LN	Lawson Number	4
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
DED	Entry Date	1
DUPD	Update Date	1
MP	Melting Point	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

All References:

ALLREF

1. Issleib, K.; Lindner, R., Justus Liebigs Ann. Chem., CODEN: JLACBF, 713, <1968>, 12-29

L51 ANSWER 22 OF 24 BEILSTEIN COPYRIGHT 2007 BEILSTEIN MDL on STN

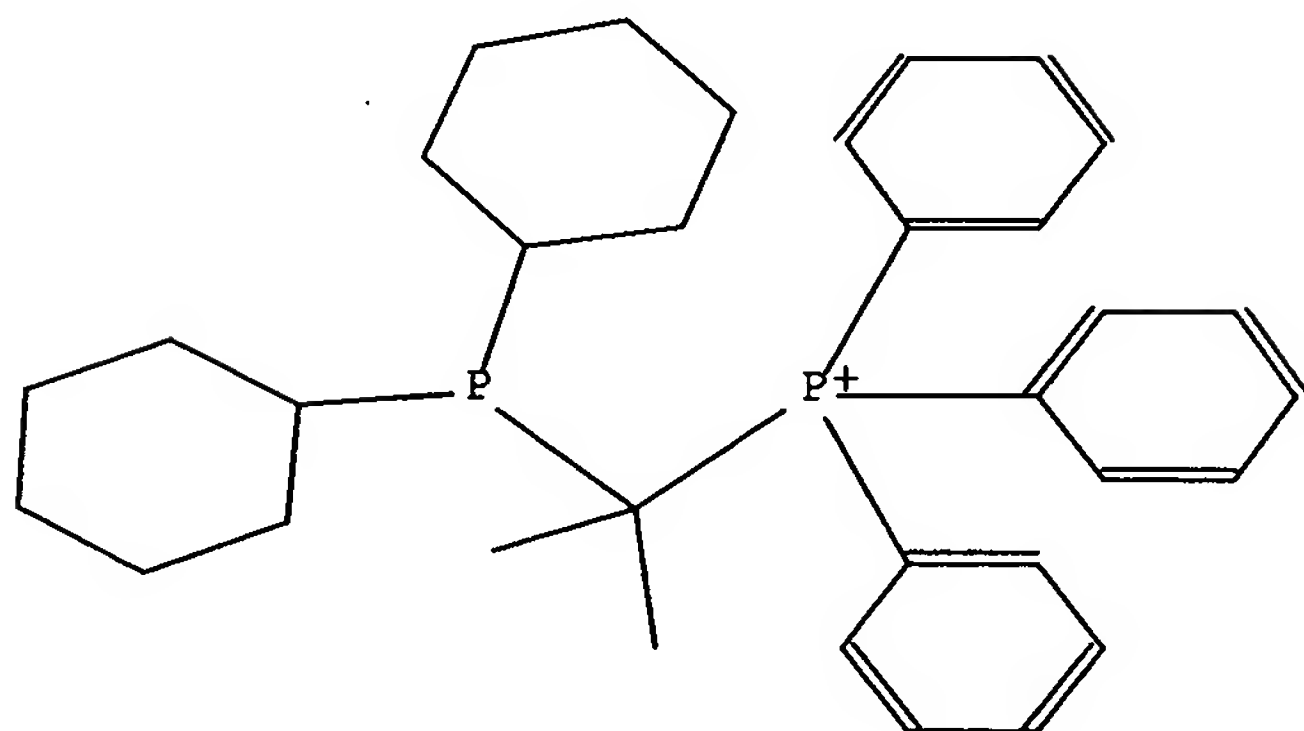
Beilstein Records (BRN): 4115452
 Beilstein Pref. RN (BPR): 15389-64-7
 CAS Reg. No. (RN): 15389-64-7
 Chemical Name (CN): (2-Dicyclohexylphosphino-propyl)-(2)-triphenylphosphonium-tetraphenyloborate
 Lin. Struct. Formula (LSF): C33H43P2(1+)*C24H20B(1-)
 Fragm. Molec. Formula (FMF): C33 H43 P2 , C24 H20 B
 Molecular Formula (MF): C33 H43 P2 . C24 H20 B
 Molecular Weight (MW): 501.65, 319.23

10/580699

Fragment BRN (FBRN): 4163294, 1654829
Lawson Number (LN): 16763, 16731, 16723, 709
Compound Type (CTYPE): isocyclic
Constitution ID (CONSID): 3768860
Tautomer ID (TAUTID): 4020027
Beilstein Citation (BSO): 5-16
Entry Date (DED): 1991/03/19
Update Date (DUPD): 1994/07/22

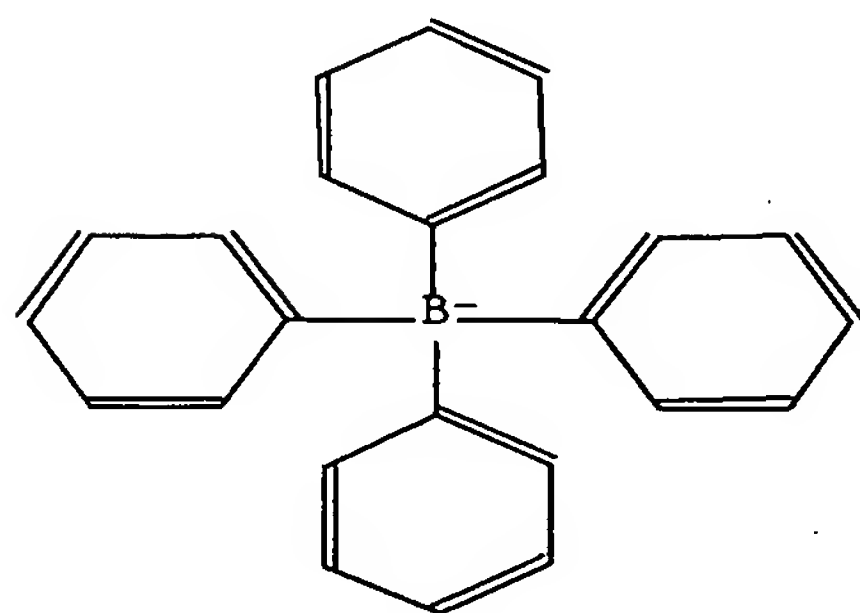
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FBRN 4163294
FMF C33 H43 P2



CM 2

FBRN 1654829
FMF C24 H20 B



Field Availability:

Code	Name	Occurrence
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BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
CN	Chemical Name	1
LSF	Linearized Structure Formula	1
FMF	Fragment Molecular Formula	2
MF	Molecular Formula	1
FW	Formular Weight	2
FBRN	Fragment BRN	2
LN	Lawson Number	4
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
DED	Entry Date	1
DUPD	Update Date	1
MP	Melting Point	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

All References:

ALLREF

1. Issleib, K.; Lindner, R., Justus Liebigs Ann. Chem., CODEN: JLACBF, 713, <1968>, 12-29

L51 ANSWER 23 OF 24 BEILSTEIN COPYRIGHT 2007 BEILSTEIN MDL on STN

Beilstein Records (BRN):	4109295
Chemical Name (CN):	Di-t.-butyl-o-isopropylphenylphosphin-HBPh4
Lin. Struct. Formula (LSF):	C24H20B(1-)*C17H29P*H(1+)
Fragm. Molec. Formula (FMF):	C24 H20 B , C17 H29 P , H
Molecular Formula (MF):	C24 H20 B . C17 H29 P . H
Molecular Weight (MW):	319.23, 264.39, 1.01
Fragment BRN (FBRN):	1654829, 2939337, 3902898
Lawson Number (LN):	16763, 16728, 3758
Compound Type (CTYPE):	isocyclic
Constitution ID (CONSID):	3766274
Tautomer ID (TAUTID):	4013332
Beilstein Citation (BSO):	5-16
Entry Date (DED):	1991/03/19
Update Date (DUPD):	1991/09/02

CM 1

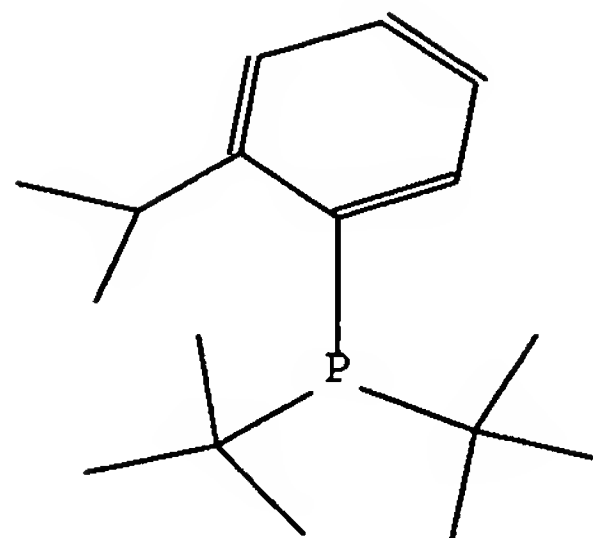
FBRN 3902898
FMF H

CM 2

FBRN 2939337

10/580699

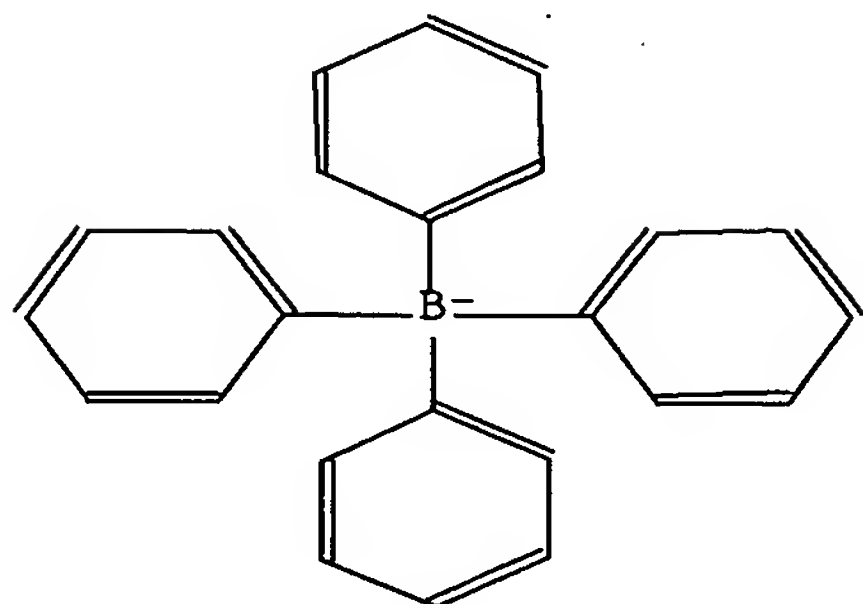
FMF C17 H29 P



CM 3

FBRN 1654829

FMF C24 H20 B



Field Availability:

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CN	Chemical Name	1
LSF	Linearized Structure Formula	1
FMF	Fragment Molecular Formula	3
MF	Molecular Formula	1
FW	Formular Weight	3
FBRN	Fragment BRN	3
LN	Lawson Number	3
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
DED	Entry Date	1
DUPD	Update Date	1
ELE	Electrical Data (MCS)	1
MP	Melting Point	1
NMR	Nuclear Magnetic Resonance	1

All References:
ALLREF

1. Gill et al., J.Chem.Soc.Dalton Trans., CODEN: JC DTBI, <1973>, 270,272

L51 ANSWER 24 OF 24 BEILSTEIN COPYRIGHT 2007 BEILSTEIN MDL on STN

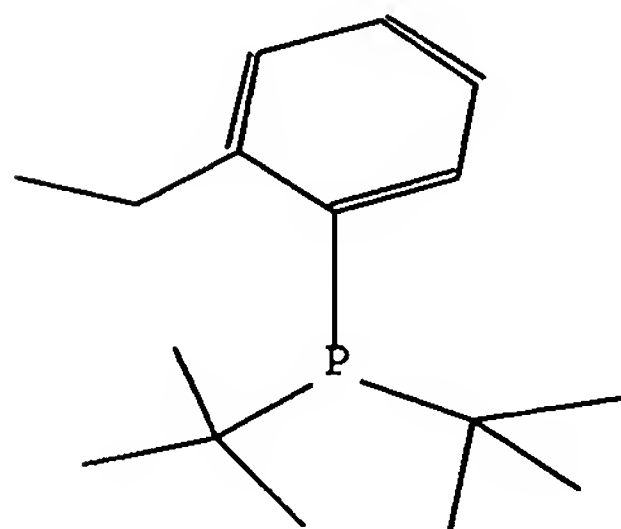
Beilstein Records (BRN):	4108753
Chemical Name (CN):	Di-t.-butyl-o-ethylphenylphosphin-HBPh4
Lin. Struct. Formula (LSF):	C24H20B(1-)*C16H27P*H(1+)
Fragm. Molec. Formula (FMF):	C24 H20 B , C16 H27 P , H
Molecular Formula (MF):	C24 H20 B . C16 H27 P . H
Molecular Weight (MW):	319.23, 250.36, 1.01
Fragment BRN (FBRN):	1654829, 2836338, 3902898
Lawson Number (LN):	16763, 16734, 3758
Compound Type (CTYPE):	isocyclic
Constitution ID (CONSID):	3765873
Tautomer ID (TAUTID):	4012726
Beilstein Citation (BSO):	5-16
Entry Date (DED):	1991/03/19
Update Date (DUPD):	1991/09/02

CM 1

FBRN 3902898
FMF H

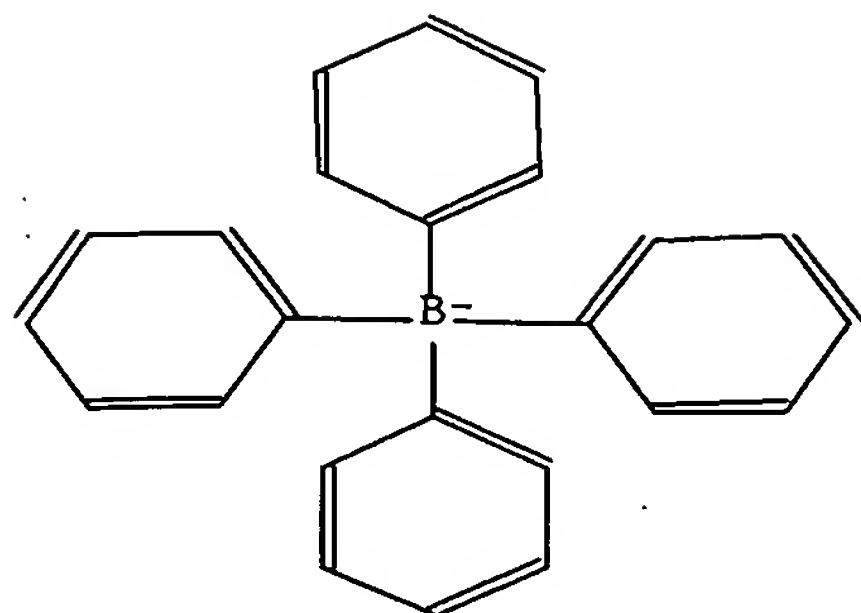
CM 2

FBRN 2836338
FMF C16 H27 P



CM 3

FBRN 1654829
FMF C24 H20 B



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
RN	CAS Registry Number	2
CN	Chemical Name	1
LSF	Linearized Structure Formula	1
FMF	Fragment Molecular Formula	3
MF	Molecular Formula	1
FW	Formular Weight	3
FBRN	Fragment BRN	3
LN	Lawson Number	3
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
DED	Entry Date	1
DUPD	Update Date	1
ELE	Electrical Data (MCS)	1
MP	Melting Point	1
NMR	Nuclear Magnetic Resonance	1

All References:

ALLREF

1. Gill et al., J.Chem.Soc.Dalton Trans., CODEN: JC DTBI, <1973>, 270,272

=> d his full

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FILE 'REGISTRY' ENTERED AT 11:47:07 ON 16 NOV 2007

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L2 STRUCTURE UPLOADED
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L4 50 SEA SSS SAM L2
L5 25294 SEA SSS FUL L2
 SAVE TEMP L5 NWA786STR2L/A
L6 9567 SEA ABB=ON PLU=ON L5 AND P/ELS
L7 4 SEA SUB=L5 SSS SAM L1

FILE 'STNGUIDE' ENTERED AT 11:52:18 ON 16 NOV 2007

FILE 'REGISTRY' ENTERED AT 11:56:18 ON 16 NOV 2007

L8 STRUCTURE UPLOADED
L9 4 SEA SUB=L5 SSS SAM L8
 D SCA
L10 47 SEA SUB=L5 SSS FUL L8
 D SCA
 SAVE TEMP L10 NWA786STR8L/A
 SAVE TEMP L10 NWA699STR8L/A
 SAVE TEMP L5 NWA699STR2L/A
 DEL NWA786STR2L/A
 DEL NWA786STR8L/A
 ACT NWA699BPRNS/A

L11 (129) SEA ABB=ON PLU=ON. (100-42-5/BI OR 100-47-0/BI OR 100-59-4/BI
 OR 10273-89-9/BI OR 105-56-6/BI OR 106-38-7/BI OR 106-99-0/BI
 OR 1066-54-2/BI OR 107-05-1/BI OR 107-15-3/BI OR 1078-71-3/BI
 OR 108-86-1/BI OR 108-90-7/BI OR 109-09-1/BI OR 109-69-3/BI OR
 110-86-1/BI OR 111-85-3/BI OR 1122-91-4/BI OR 113279-72-4/BI
 OR 115-19-5/BI OR 122-39-4/BI OR 123-54-6/BI OR 131322-08-2/BI
 OR 13597-73-4/BI OR 13716-10-4/BI OR 13716-12-6/BI OR 143-66-8/
 BI OR 15181-07-4/BI OR 15359-96-3/BI OR 155234-93-8/BI OR
 15738-23-5/BI OR 1592-20-7/BI OR 16419-60-6/BI OR 16523-54-9/BI
 OR 200352-94-9/BI OR 2042-85-5/BI OR 20488-42-0/BI OR
 20573-48-2/BI OR 224311-51-7/BI OR 2350-89-2/BI OR 25032-48-8/B
 I OR 2622-14-2/BI OR 2920-38-9/BI OR 29949-72-2/BI OR 2996-92-1
 /BI OR 29965-97-7/BI OR 32673-25-9/BI OR 3375-31-3/BI OR
 356518-17-7/BI OR 42092-01-3/BI OR 4553-07-5/BI OR 460-00-4/BI
 OR 501-65-5/BI OR 50704-04-6/BI OR 51364-51-3/BI OR 536-74-3/BI
 OR 538-58-9/BI OR 541-16-2/BI OR 542-18-7/BI OR 542-92-7/BI
 OR 56512-48-2/BI OR 56522-08-8/BI OR 5720-05-8/BI OR 586-77-6/B
 I OR 6002-40-0/BI OR 603-34-9/BI OR 603-35-0/BI OR 623-03-0/BI
 OR 629-04-9/BI OR 629-06-1/BI OR 629-20-9/BI OR 64-19-7/BI OR
 643-58-3/BI OR 644-08-6/BI OR 6476-36-4/BI OR 6738-23-4/BI OR
 6781-98-2/BI OR 72617-31-3/BI OR 74-85-1/BI OR 7439-89-6/BI OR
 7439-95-4/BI OR 7439-96-5/BI OR 7440-02-0/BI OR 7440-05-3/BI
 OR 7440-06-4/BI OR 7440-16-6/BI OR 7440-18-8/BI OR 7440-48-4/BI
 OR 7459-73-6/BI OR 75-01-4/BI OR 75-05-8/BI OR 76-05-1/BI OR
 7646-85-7/BI OR 7647-01-0/BI OR 7647-10-1/BI OR 7664-93-9/BI
 OR 77123-57-0/BI OR 7719-12-2/BI OR 78-86-4/BI OR 80-62-6/BI
 OR 81233-93-4/BI OR 853073-44-6/BI OR 853073-45-7/BI OR
 853073-46-8/BI OR 853073-47-9/BI OR 853073-48-0/BI OR 853073-50

-4/BI OR 853073-51-5/BI OR 853073-53-7/BI OR 853073-54-8/BI OR
853073-55-9/BI OR 85

L12 (38) SEA ABB=ON PLU=ON L11 AND P/ELS
L13 (27) SEA ABB=ON PLU=ON L11 AND B/ELS
L14 22 SEA ABB=ON PLU=ON L12 AND L13

ACT NWA699HITRNS/A

L15 (129) SEA ABB=ON PLU=ON (100-42-5/BI OR 100-47-0/BI OR 100-59-4/BI
OR 10273-89-9/BI OR 105-56-6/BI OR 106-38-7/BI OR 106-99-0/BI
OR 1066-54-2/BI OR 107-05-1/BI OR 107-15-3/BI OR 1078-71-3/BI
OR 108-86-1/BI OR 108-90-7/BI OR 109-09-1/BI OR 109-69-3/BI OR
110-86-1/BI OR 111-85-3/BI OR 1122-91-4/BI OR 113279-72-4/BI
OR 115-19-5/BI OR 122-39-4/BI OR 123-54-6/BI OR 131322-08-2/BI
OR 13597-73-4/BI OR 13716-10-4/BI OR 13716-12-6/BI OR 143-66-8/
BI OR 15181-07-4/BI OR 15359-96-3/BI OR 155234-93-8/BI OR
15738-23-5/BI OR 1592-20-7/BI OR 16419-60-6/BI OR 16523-54-9/BI
OR 200352-94-9/BI OR 2042-85-5/BI OR 20488-42-0/BI OR
20573-48-2/BI OR 224311-51-7/BI OR 2350-89-2/BI OR 25032-48-8/B
I OR 2622-14-2/BI OR 2920-38-9/BI OR 29949-72-2/BI OR 2996-92-1
/BI OR 29965-97-7/BI OR 32673-25-9/BI OR 3375-31-3/BI OR
356518-17-7/BI OR 42092-01-3/BI OR 4553-07-5/BI OR 460-00-4/BI
OR 501-65-5/BI OR 50704-04-6/BI OR 51364-51-3/BI OR 536-74-3/BI
OR 538-58-9/BI OR 541-16-2/BI OR 542-18-7/BI OR 542-92-7/BI
OR 56512-48-2/BI OR 56522-08-8/BI OR 5720-05-8/BI OR 586-77-6/B
I OR 6002-40-0/BI OR 603-34-9/BI OR 603-35-0/BI OR 623-03-0/BI
OR 629-04-9/BI OR 629-06-1/BI OR 629-20-9/BI OR 64-19-7/BI OR
643-58-3/BI OR 644-08-6/BI OR 6476-36-4/BI OR 6738-23-4/BI OR
6781-98-2/BI OR 72617-31-3/BI OR 74-85-1/BI OR 7439-89-6/BI OR
7439-95-4/BI OR 7439-96-5/BI OR 7440-02-0/BI OR 7440-05-3/BI
OR 7440-06-4/BI OR 7440-16-6/BI OR 7440-18-8/BI OR 7440-48-4/BI
OR 7459-73-6/BI OR 75-01-4/BI OR 75-05-8/BI OR 76-05-1/BI OR
7646-85-7/BI OR 7647-01-0/BI OR 7647-10-1/BI OR 7664-93-9/BI
OR 77123-57-0/BI OR 7719-12-2/BI OR 78-86-4/BI OR 80-62-6/BI
OR 81233-93-4/BI OR 853073-44-6/BI OR 853073-45-7/BI OR
853073-46-8/BI OR 853073-47-9/BI OR 853073-48-0/BI OR 853073-50
-4/BI OR 853073-51-5/BI OR 853073-53-7/BI OR 853073-54-8/BI OR
853073-55-9/BI OR 85

L16 (38) SEA ABB=ON PLU=ON L15 AND P/ELS
L17 (27) SEA ABB=ON PLU=ON L15 AND B/ELS
L18 (22) SEA ABB=ON PLU=ON L16 AND L17
L19 (3) SEA ABB=ON PLU=ON (20573-48-2/BI OR 131322-08-2/BI OR
155234-93-8/BI)

L20 19 SEA ABB=ON PLU=ON L18 NOT L19

L21 21 SEA ABB=ON PLU=ON L10 AND L14

L22 1 SEA ABB=ON PLU=ON L14 NOT L21
D SCA

L23 2 SEA ABB=ON PLU=ON L21 NOT L20
D SCA

L24 45 SEA ABB=ON PLU=ON L10 NOT L23

FILE 'ZCAPLUS' ENTERED AT 12:05:19 ON 16 NOV 2007

L25 18 SEA ABB=ON PLU=ON L24
ACT NWA699AU1/A

L26 104 SEA ABB=ON PLU=ON MASAOKA S?/AU

ACT NWA699AU2/A

10/580699

L27 6 SEA ABB=ON PLU=ON IWAZAKI H?/AU

L28 1 SEA ABB=ON PLU=ON L26 AND L27

L29 1 SEA ABB=ON PLU=ON L26 AND L25
D AU

L30 1 SEA ABB=ON PLU=ON (L26 OR L27) AND L25

L31 242547 SEA ABB=ON PLU=ON BORON/BI

L32 2 SEA ABB=ON PLU=ON L31 AND L26

L33 0 SEA ABB=ON PLU=ON L31 AND L27

FILE 'BEILSTEIN' ENTERED AT 12:08:18 ON 16 NOV 2007

L34 36 SEA SSS SAM L2

L35 2084 SEA SSS FUL L2

L36 1 SEA SUB=L35 SSS SAM L8

L37 16 SEA SUB=L35 SSS FUL L8

L38 9 SEA ABB=ON PLU=ON L37 AND BABSAN/FA
SEL BABSAN

FILE 'BABS' ENTERED AT 12:09:51 ON 16 NOV 2007

L39 4 SEA ABB=ON PLU=ON (6281441/BABSAN OR 6594776/BABSAN OR
6580383/BABSAN OR 6432734/BABSAN)

FILE 'ZCAPLUS, BABS' ENTERED AT 12:10:04 ON 16 NOV 2007

L40 19 DUP REM L25 L39 (3 DUPLICATES REMOVED)
ANSWERS '1-18' FROM FILE ZCAPLUS
ANSWER '19' FROM FILE BABS

FILE 'BEILSTEIN' ENTERED AT 12:10:20 ON 16 NOV 2007

L41 7 SEA ABB=ON PLU=ON L37 NOT L38

L42 1 SEA ABB=ON PLU=ON L41 AND RN/FA

FILE 'REGISTRY' ENTERED AT 12:13:07 ON 16 NOV 2007

FILE 'ZCAPLUS' ENTERED AT 12:13:11 ON 16 NOV 2007

D STAT QUE L28

D STAT QUE L32

FILE 'WPIX' ENTERED AT 12:13:31 ON 16 NOV 2007

L43 1 SEA ABB=ON PLU=ON L26 AND L27

FILE 'ZCAPLUS' ENTERED AT 12:13:51 ON 16 NOV 2007

L44 3 SEA ABB=ON PLU=ON L28 OR L32

FILE 'ZCAPLUS, WPIX' ENTERED AT 12:14:06 ON 16 NOV 2007

L45 3 DUP REM L44 L43 (1 DUPLICATE REMOVED)
ANSWERS '1-3' FROM FILE ZCAPLUS
D IBIB ABS HITIND HITSTR L45 1-3

FILE 'REGISTRY' ENTERED AT 12:14:58 ON 16 NOV 2007

FILE 'ZCAPLUS' ENTERED AT 12:15:02 ON 16 NOV 2007

D STAT QUE L28

D STAT QUE L32

L46 2 SEA ABB=ON PLU=ON (L26 OR L31) AND L25

FILE 'WPIX' ENTERED AT 12:15:52 ON 16 NOV 2007

D STAT QUE L43

FILE 'ZCAPLUS' ENTERED AT 12:16:12 ON 16 NOV 2007

L47 4 SEA ABB=ON PLU=ON L28 OR L32 OR L46

L48 FILE 'ZCAPLUS, WPIX' ENTERED AT 12:16:30 ON 16 NOV 2007
4 DUP REM L47 L43 (1 DUPLICATE REMOVED)
ANSWERS '1-4' FROM FILE ZCAPLUS
D IBIB ABS HITIND HITSTR L48 1-4

FILE 'REGISTRY' ENTERED AT 12:17:47 ON 16 NOV 2007

L49 FILE 'ZCAPLUS' ENTERED AT 12:17:51 ON 16 NOV 2007
D STAT QUE L25
L50 4 SEA L48
16 SEA ABB=ON PLU=ON L25 NOT L49

FILE 'BABS' ENTERED AT 12:18:50 ON 16 NOV 2007
D STAT QUE L39

FILE 'BEILSTEIN' ENTERED AT 12:19:02 ON 16 NOV 2007
D STAT QUE L41

L51 FILE 'ZCAPLUS, BABS, BEILSTEIN' ENTERED AT 12:19:19 ON 16 NOV 2007
24 DUP REM L50 L39 L41 (3 DUPLICATES REMOVED)
ANSWERS '1-16' FROM FILE ZCAPLUS
ANSWER '17' FROM FILE BABS
ANSWERS '18-24' FROM FILE BEILSTEIN
D IBIB ABS HITSTR L51 1-16
D IALL L51 17
D IDE ALLREF L51 18-24

FILE HOME

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 15 NOV 2007 HIGHEST RN 953991-83-8
DICTIONARY FILE UPDATES: 15 NOV 2007 HIGHEST RN 953991-83-8

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

FILE STNGUIDE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Nov 9, 2007 (20071109/UP).

FILE ZCAPLUS

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FILE COVERS 1907 - 16 Nov 2007 VOL 147 ISS 22
FILE LAST UPDATED: 15 Nov 2007 (20071115/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BEILSTEIN
FILE LAST UPDATED ON September 26, 2007

FILE COVERS 1771 TO 2007.
FILE CONTAINS 10.119,480 SUBSTANCES

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For more detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. *
* FOR PRICE INFORMATION SEE HELP COST *

NEW

* **PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.**
* **NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.**

FILE BABS
FILE LAST UPDATED: 25 JUN 2007 <20070625/UP>
FILE COVERS 1980 TO DATE.

FILE WPIX
FILE LAST UPDATED: 13 NOV 2007 <20071113/UP>
MOST RECENT THOMSON SCIENTIFIC UPDATE: 200773 <200773/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> IPC Reform backfile reclassification has been loaded to September 6th

2007. No update date (UP) has been created for the reclassified documents, but they can be identified by 20060101/UPIC and 20061231/UPIC, 20070601/UPIC and 20071001/UPIC. <<<

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